

NORTHERN CALIFORNIA

TIDELOG®

2017



NORTHERN CALIFORNIA

Daily Tide Graphics
based on predictions by

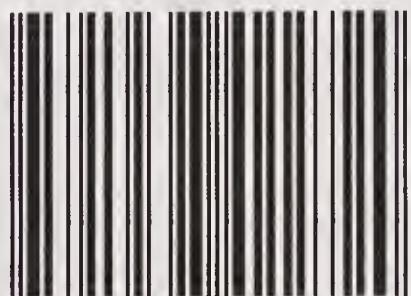
*National Ocean Service
U.S. Department of Commerce
National Oceanic & Atmospheric Administration*

Astronomical Data
Courtesy of the United States Naval Observatory

Illustrated by
M. C. Escher
"Second Day of Creation"
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TIDELOG 2017

GRAPHIC ALMANAC FOR NORTHERN CALIFORNIA

Including San Francisco Bay and Delta;
South to Monterey and north to the Nehalem River in Oregon

Tidelog brings the numbers to life!

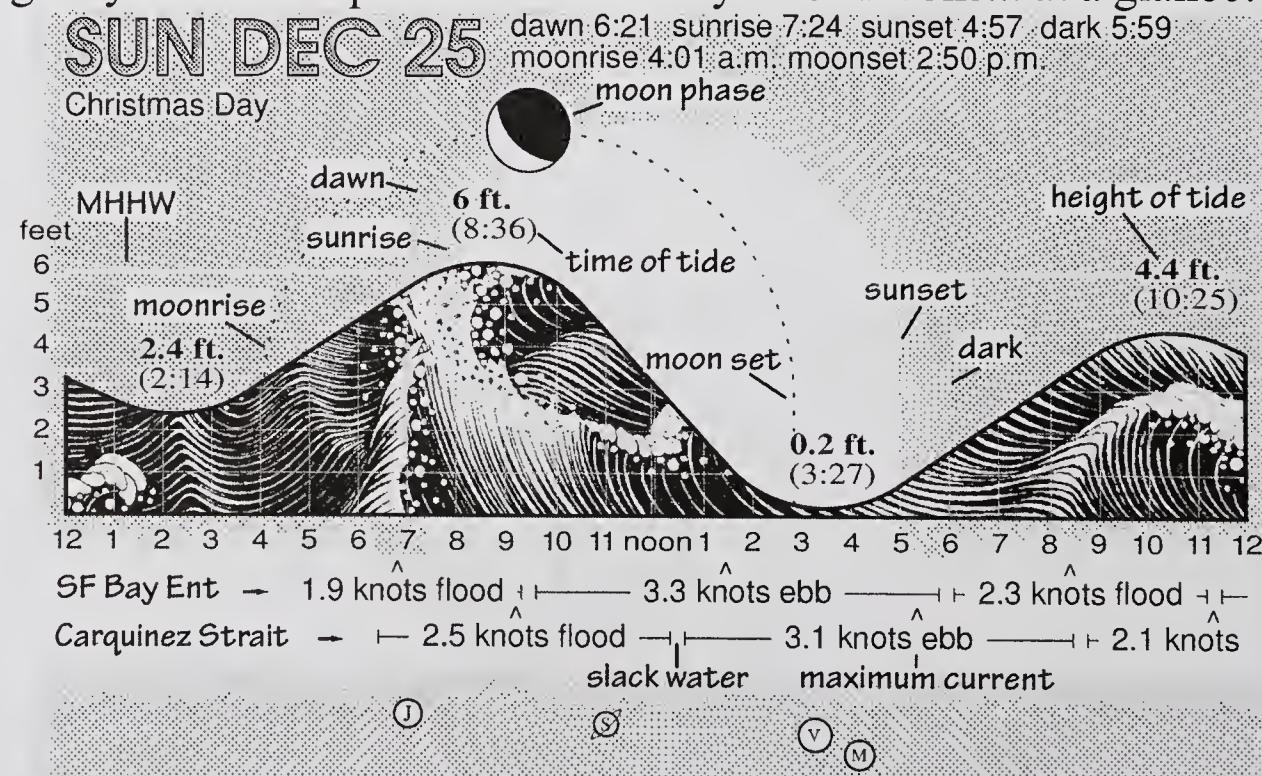
TIDES: Daily graphics are based on official National Oceanic & Atmospheric Administration (NOAA) predictions for San Francisco, at the Golden Gate Bridge. Tide tables for Arena Cove, Port Chicago and Humboldt Bay, as well as corrections and approximations for other locations, are in the back of the Tidelog.

Tide height is relative to the NOAA chart datum for mean lower low water (MLLW) which is represented by the x-axis of the daily graphic. Also indicated is mean higher high water (MHHW) shown as a horizontal white line at 5.84 feet showing the Great Diurnal Range, which is the difference in height between MHHW and MLLW.

CURRENTS: Time and strength of maximum currents and times of slack water are shown daily at San Francisco Bay Entrance and Carquinez Strait. Maximum current times are indicated by a “^” while slack water intervals are indicated by a “↔” at the points between ebbs and floods.

Current tables for the Golden Gate Bridge, Benicia Bridge, San Mateo, Richmond and Oakland, as well as corrections for other locations, are in the back of the Tidelog. For a comprehensive view of the tidal currents throughout San Francisco Bay, please see the **Tidal Current Charts** at the back of the Tidelog.

HOW TIDELOG BRINGS THE NUMBERS TO LIFE: the daily graphic below shows the tides, currents and astronomical movements to give you a visual picture for each day's conditions... at a glance!



Moon: The principal determinant of the tides is treated in detail, showing the interplay of the tides with the moon's phase, distance (apogee, perigee), and declination (north, south or over the equator).

The moon is shown in its current phase each day at the time it is highest. The dotted arcs indicate moonrise and moonset, and show which night times will have moonlight and which will be dark.

For an explanation of terminology and a brief outline of the forces which influence the tides and currents, see the next-to-last page of the Tidelog.

SUNRISE & SUNSET, DAWN & DUSK: Shown by the skyshading. The lighter band near the sun indicates the duration of nautical twilight, which determines "dawn" and "dark." Actual times are given daily.

DAYLIGHT SAVING TIME: All information in Tidelog is adjusted for Daylight Saving Time beginning at 12:01 a.m. on the second Sunday of March and ending at 12:01 a.m. on the first Sunday of November.

NOAA PREDICTIONS: Assume normal weather with normal seasonal variations. You must adjust the predictions for particular conditions. Heavy rainfall, low barometric pressure and strong onshore winds increase tides, while the opposite will decrease them.

We have made every effort to ensure that Tidelog's graphics faithfully depict NOAA predictions, but we cannot guarantee accuracy.

PLANETS: The five planets visible to the naked eye are shown at zenith, sized according to brightness as shown below:

Ⓐ Venus ⓒ Mars ⓓ Saturn ⓔ Jupiter Ⓨ Mercury

The planets move slowly, so they are shown only once a week in the panel after the Sunday daily graphic. Generally, a planet crossing overhead before noon is visible in the east before sunrise (Jupiter and Saturn, on the facing page); a planet which is overhead after noon is seen in the west after sunset (Venus and Mars, on the facing page); and a planet overhead near midnight may be seen all night. A planet whose zenith is within 45 minutes of the sun's is usually too close to the sun for observation, and is not shown until it is again visible (Mercury, in this instance).

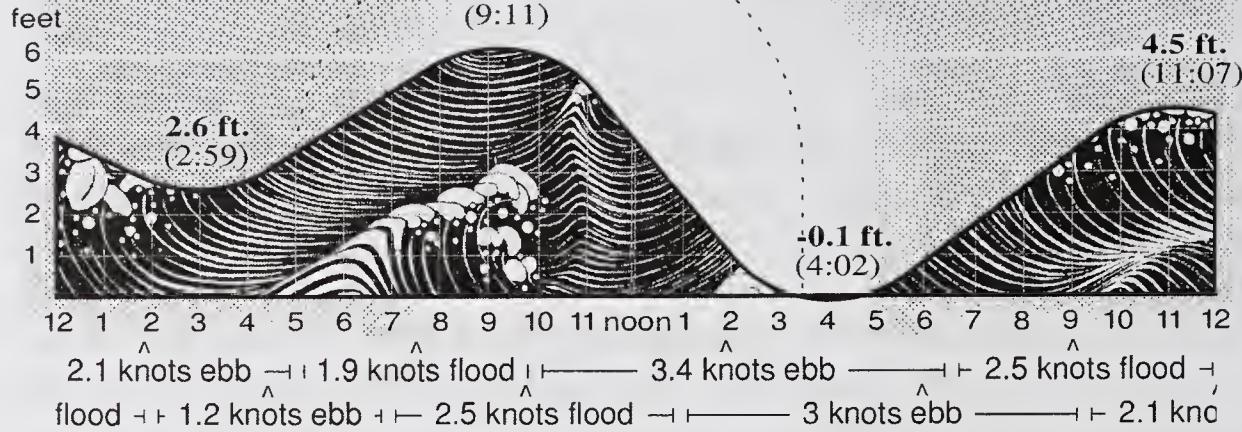
METEOR SHOWERS, ECLIPSES: Noted when appropriate.

MON DEC 26

dawn 6:22 sunrise 7:24 sunset 4:58 dark 6:00
moonrise 4:56 a.m. moonset 3:28 p.m.



6 ft.
(9:11)

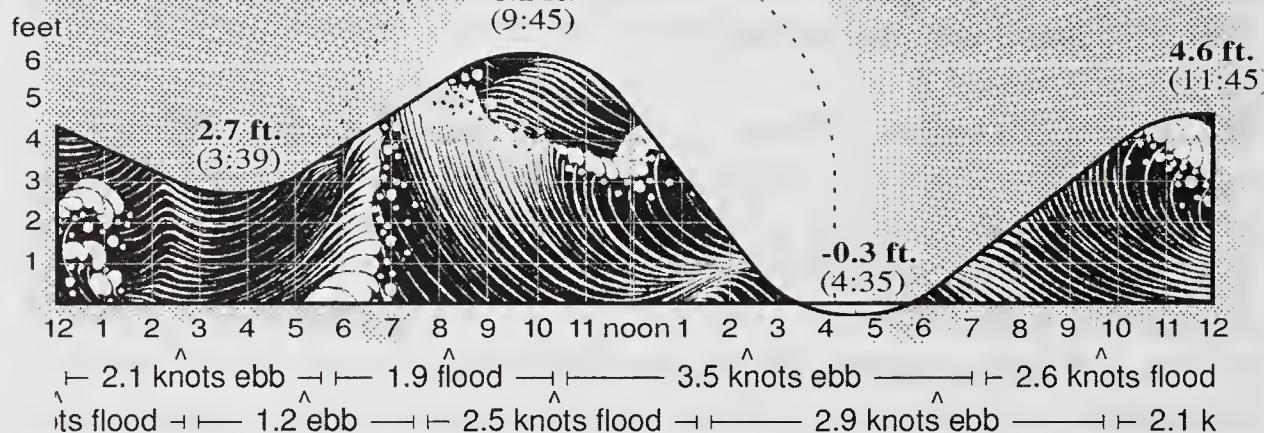


TUE DEC 27

dawn 6:22 sunrise 7:24 sunset 4:58 dark 6:01
moonrise 5:49 a.m. moonset 4:10 p.m.



6.1 ft.
(9:45)



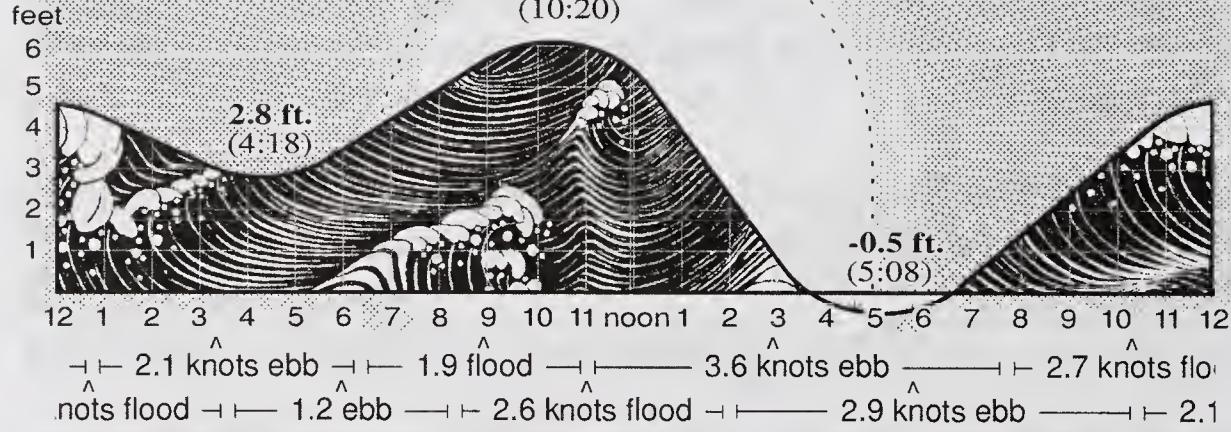
WED DEC 28

dawn 6:22 sunrise 7:25 sunset 4:59 dark 6:01
moonrise 6:41 a.m. moonset 4:57 p.m.

New Moon 10:53 p.m.



6.1 ft.
(10:20)

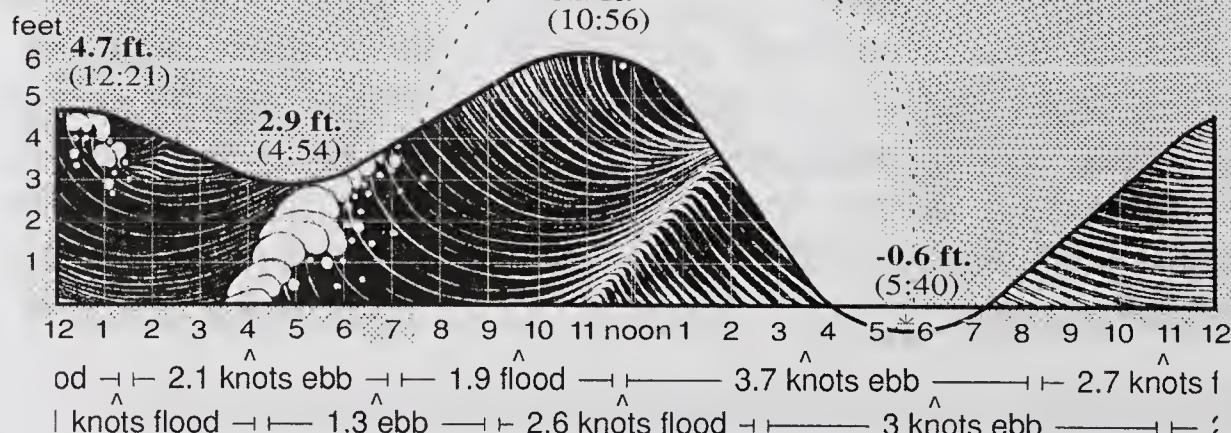


THU DEC 29

dawn 6:23 sunrise 7:25 sunset 5:00 dark 6:02
moonrise 7:30 a.m. moonset 5:48 p.m.

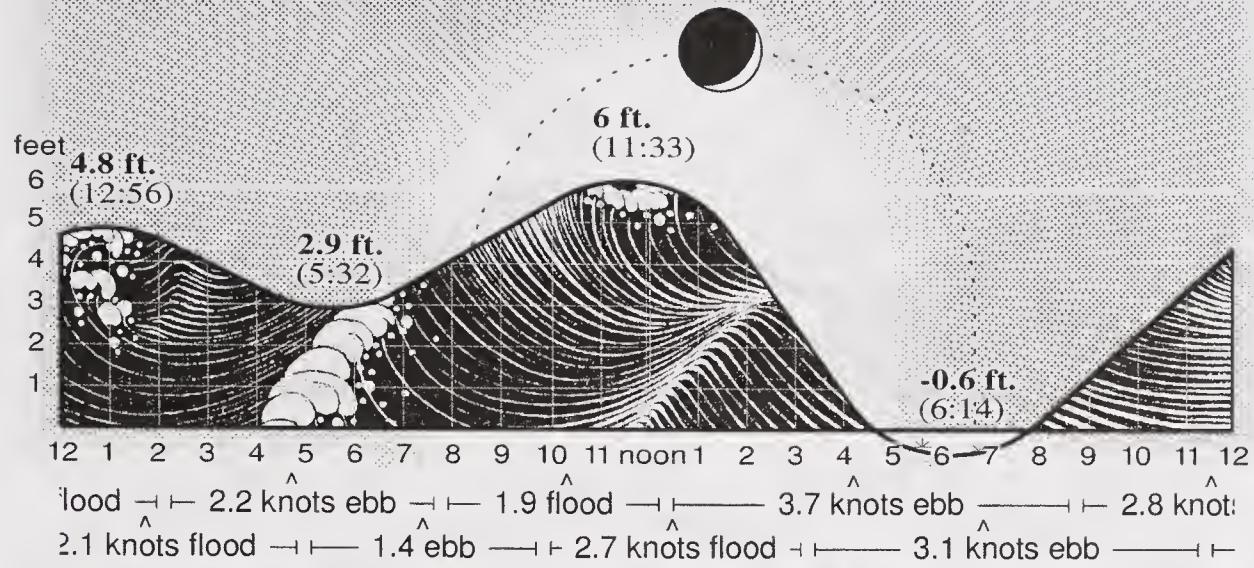


6.1 ft.
(10:56)



FRI DEC 30

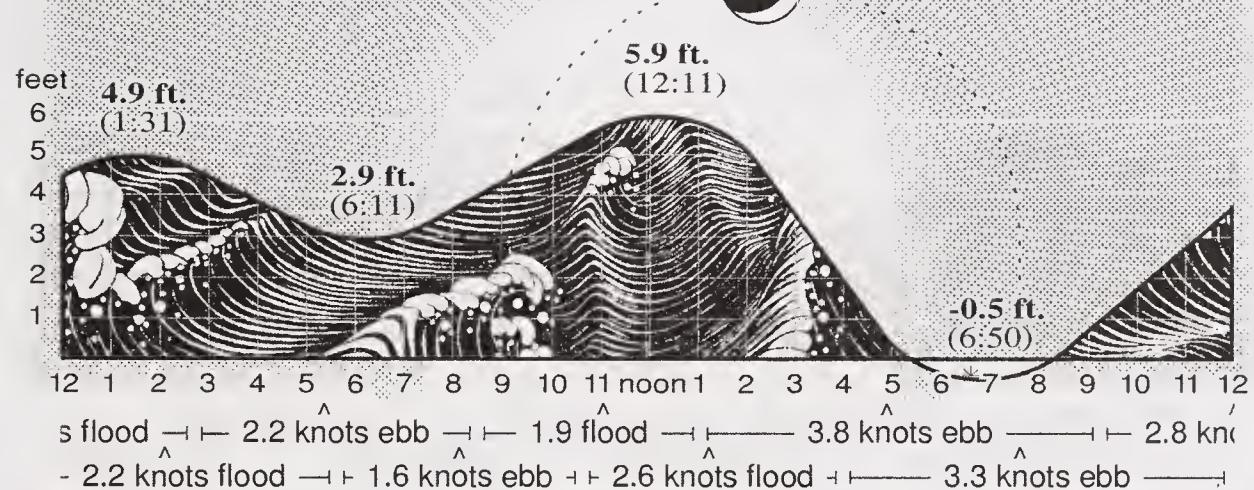
dawn 6:23 sunrise 7:25 sunset 5:01 dark 6:03
moonrise 8:16 a.m. moonset 6:43 p.m.



SAT DEC 31

dawn 6:23 sunrise 7:25 sunset 5:01 dark 6:03
moonrise 9:00 a.m. moonset 7:40 p.m.

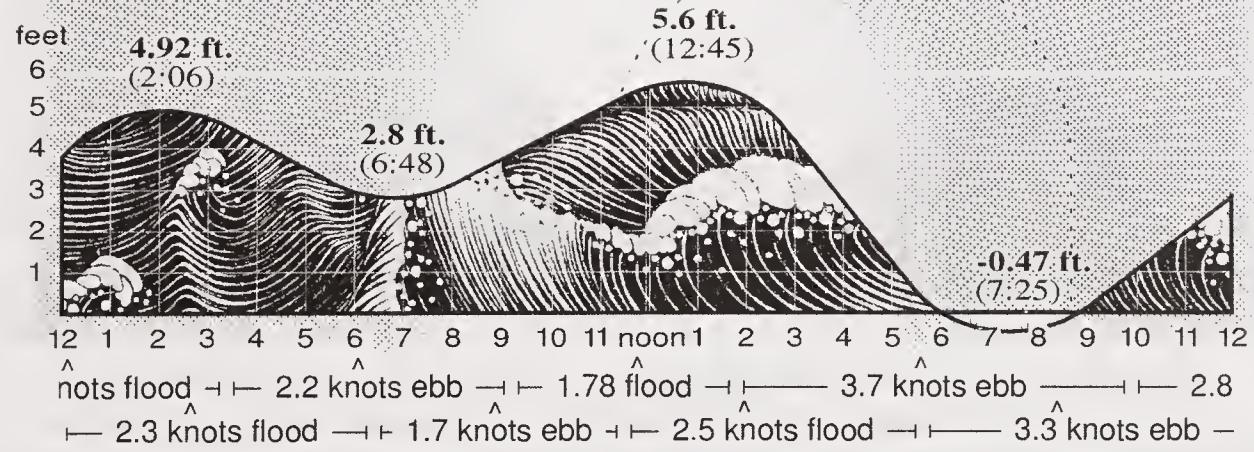
New Year's Eve



SUN JAN 1

dawn 6:23 sunrise 7:25 sunset 5:02 dark 6:04
moonrise 8:40 p.m. moonset 9:42 p.m.

New Year's Day



J

5

VM

MON JAN 2

dawn 6:24 sunrise 7:26 sunset 5:03 dark 6:05
moonrise 10:17 a.m. moonset 9:42 p.m.

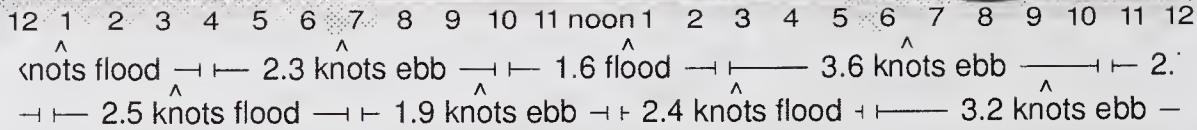


feet

5 ft.
(2:44)

5.4 ft.
(1:30)

-0.2 ft.
(8:06)



TUE JAN 3

dawn 6:24 sunrise 7:26 sunset 5:04 dark 6:06
moonrise 10:52 a.m. moonset 10:44 p.m.

Quadrantids Meteor Peak

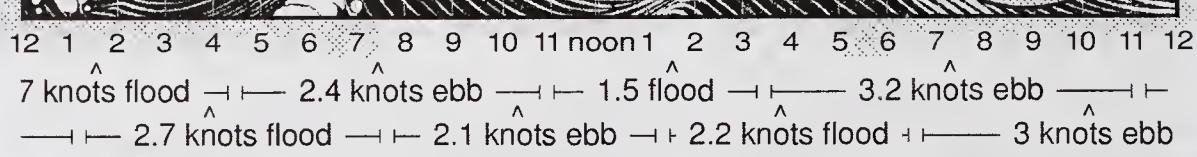


feet

5.1 ft.
(3:25)

4.9 ft.
(2:24)

0.2 ft.
(8:51)



WED JAN 4

dawn 6:24 sunrise 7:26 sunset 5:05 dark 6:07
moonrise 11:27 a.m. moonset 11:48 p.m.

Earth at Perihelion 6:18 a.m.

equator

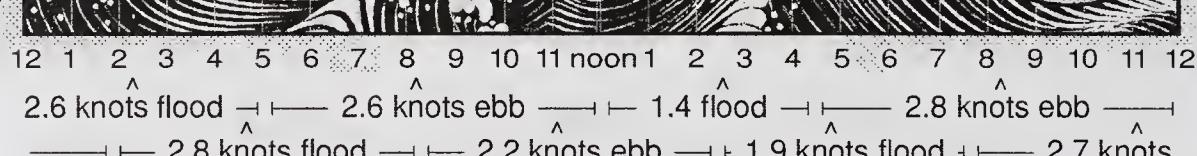


feet

5.3 ft.
(4:09)

4.5 ft.
(3:31)

0.7 ft.
(9:42)



THU JAN 5

dawn 6:24 sunrise 7:26 sunset 5:06 dark 6:07
moonrise 12:02 p.m.



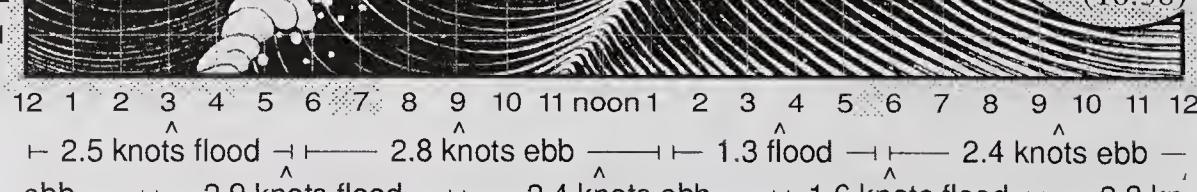
feet

5.5 ft.
(4:55)

4.1 ft.
(4:55)

1.2 ft.
(10:38)

1.9 ft.
(11:02)



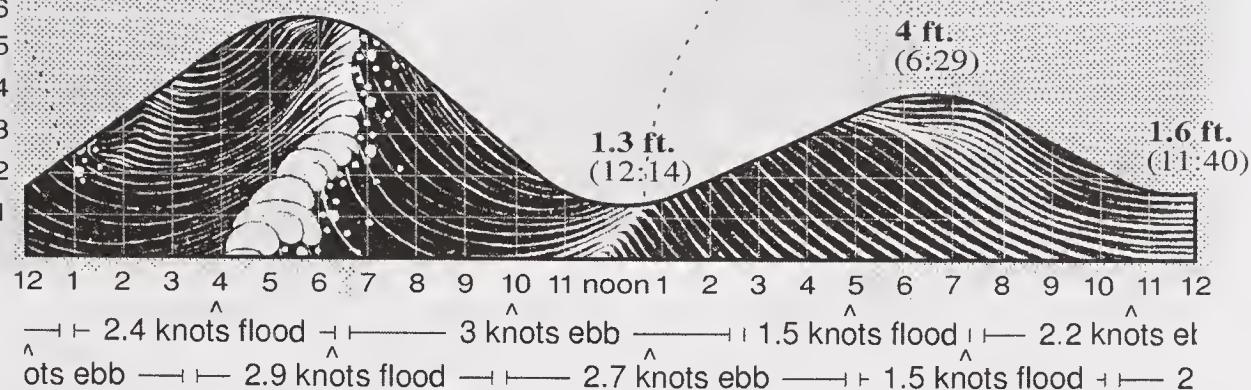
FRI JAN 6

dawn 6:24 sunrise 7:26 sunset 5:06 dark 6:08
moonset 12:54 a.m. moonrise 12:39 p.m.



feet

5.8 ft.
(5:43)



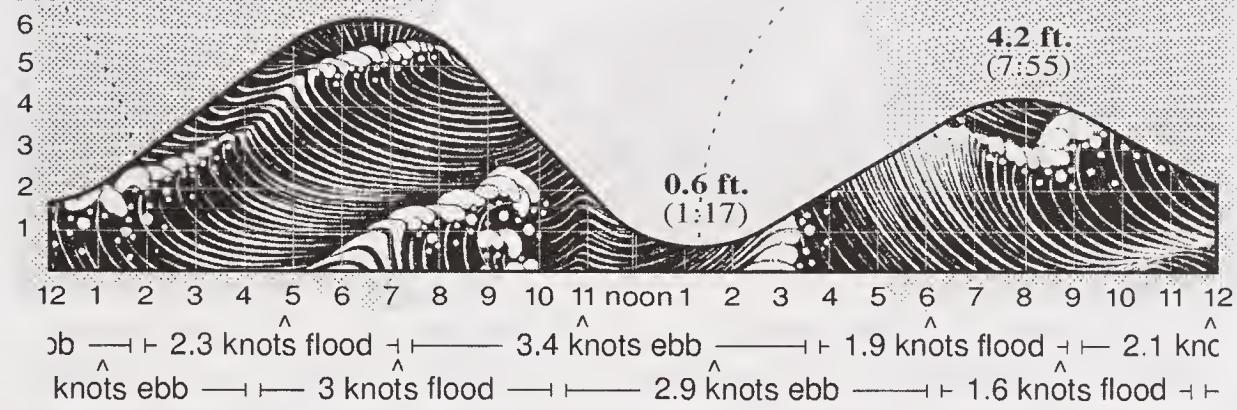
SAT JAN 7

dawn 6:24 sunrise 7:26 sunset 5:07 dark 6:09
moonset 2:01 a.m. moonrise 1:19 p.m.



feet

6.1 ft.
(6:32)



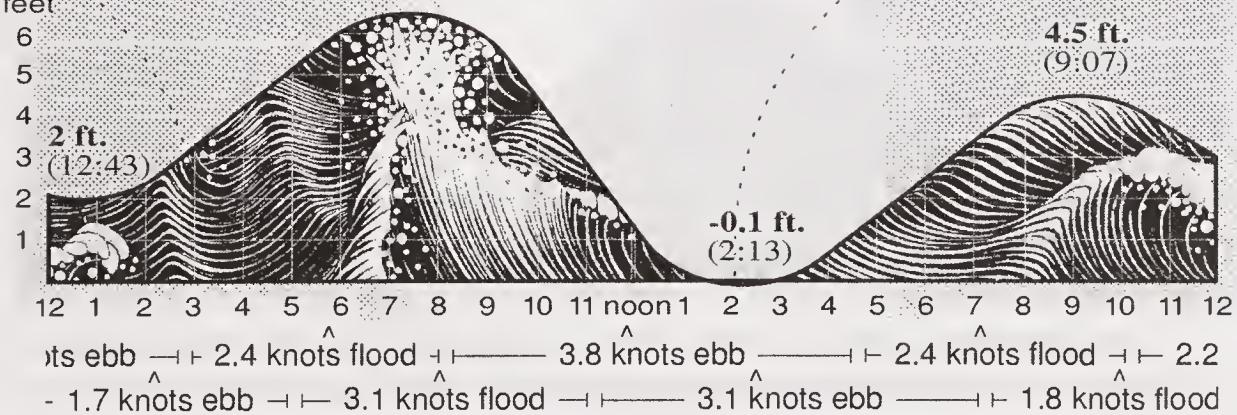
SUN JAN 8

dawn 6:24 sunrise 7:26 sunset 5:08 dark 6:10
moonset 3:09 a.m. moonrise 2:04 p.m.



feet

6.5 ft.
(7:23)



J

S

m

V

M

Quadrantids Meteor Shower The Quadrantids run annually each year from January 1st through the 5th and radiate from the constellation Boötes. The Quadrantids at peak can produce up to 40 meteors per hour. This year's peak falls on the evening of January 3rd and the morning of the 4th. To locate constellation Boötes, the apparent source of the meteor shower, first find the Big Dipper. Then follow the arching curve of the Big Dipper's handle away from the dipper's bowl until you come to the first bright star. This is Arcturus - the third brightest star in the sky. Look to the north from Arcturus and you will see the kite shaped formation of the constellation Boötes.

MON JAN 9

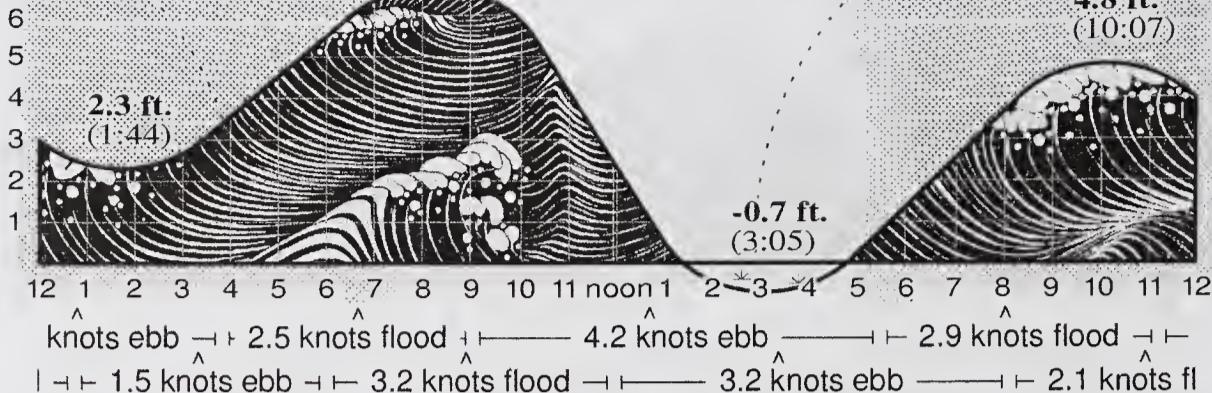
dawn 6:24 sunrise 7:25 sunset 5:09 dark 6:11
moonset 4:17 a.m. moonrise 2:53 p.m.

perigee



6.7 ft.
(8:12)

feet



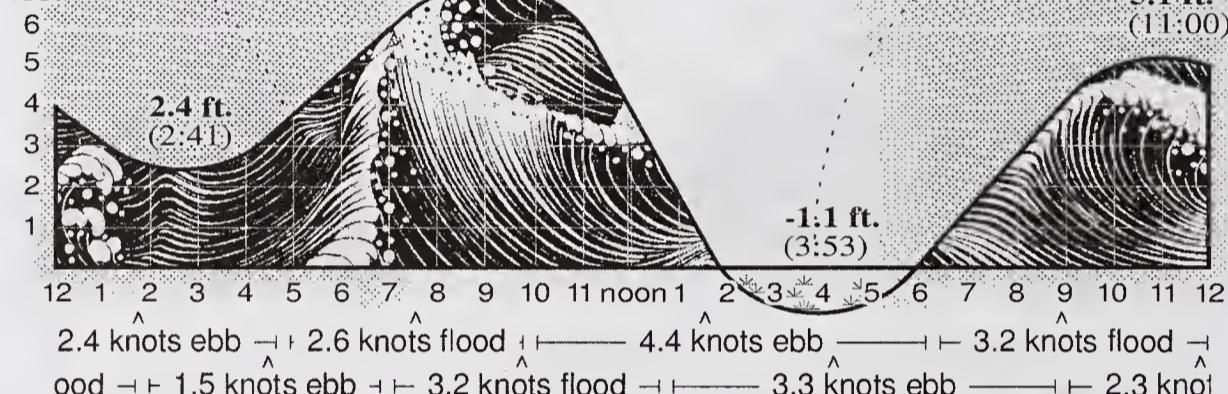
TUE JAN 10

dawn 6:24 sunrise 7:25 sunset 5:10 dark 6:12
moonset 5:24 a.m. moonrise 3:49 p.m.



6.9 ft.
(9:02)

feet



WED JAN 11

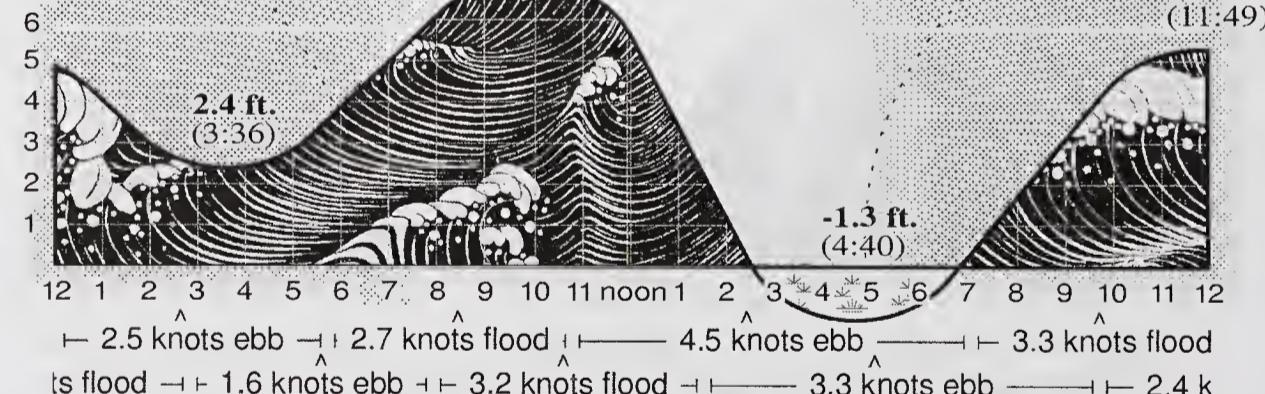
dawn 6:24 sunrise 7:25 sunset 5:11 dark 6:13
moonset 6:26 a.m. moonrise 4:50 p.m.

North



7 ft.
(9:51)

feet



THU JAN 12

dawn 6:24 sunrise 7:25 sunset 5:12 dark 6:13
moonset 7:22 a.m. moonrise 5:54 p.m.

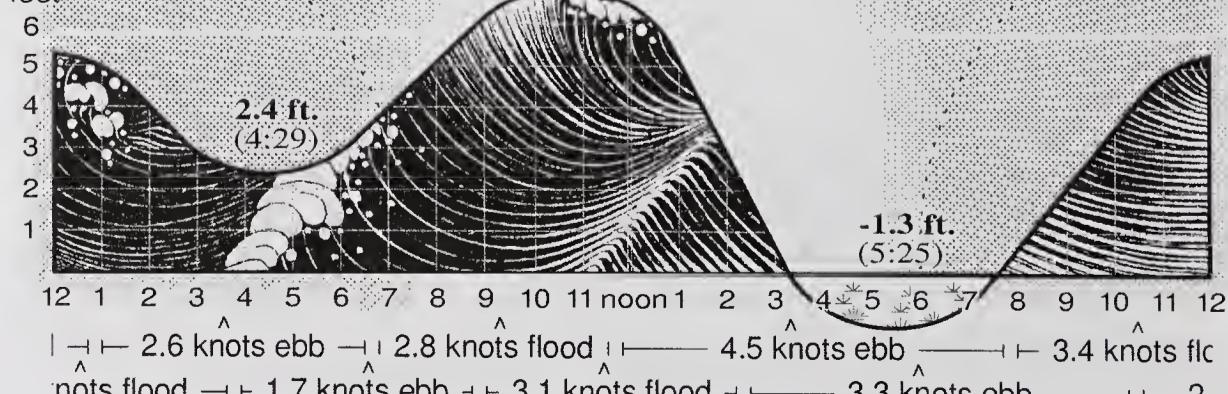


Full Moon 3:34 a.m.

Venus Eastern Elongation

6.9 ft.
(10:40)

feet



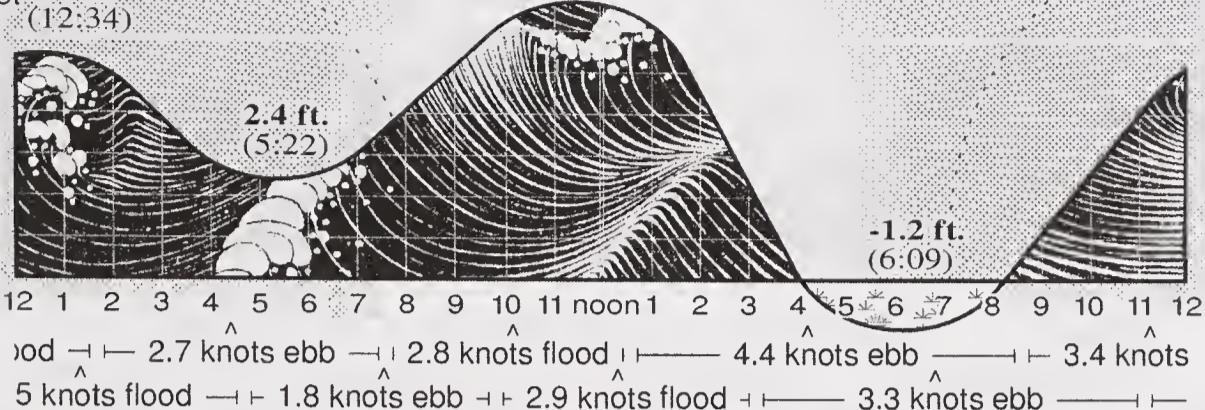
FRI JAN 13

dawn 6:23 sunrise 7:25 sunset 5:13 dark 6:14
moonset 8:12 a.m. moonrise 7:00 p.m.



feet 5.4 ft.
(12:34)

6.7 ft.
(11:28)



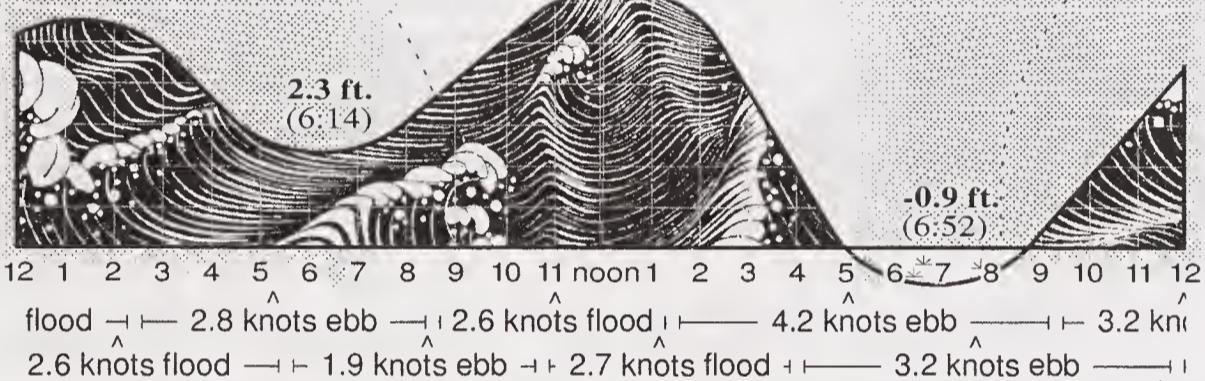
SAT JAN 14

dawn 6:23 sunrise 7:24 sunset 5:14 dark 6:15
moonset 8:55 a.m. moonrise 8:04 p.m.



feet 5.5 ft.
(1:18)

6.3 ft.
(12:16)



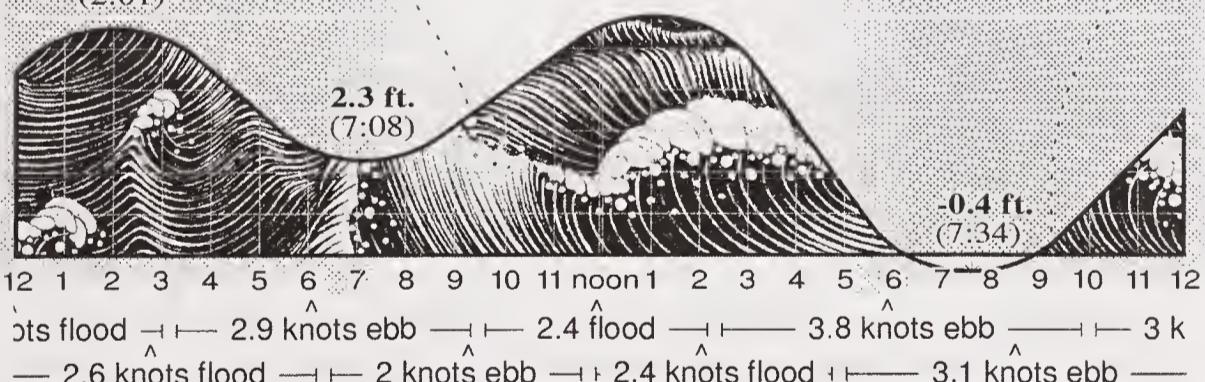
SUN JAN 15

dawn 6:23 sunrise 7:24 sunset 5:15 dark 6:16
moonset 9:33 a.m. moonrise 9:07 p.m.



feet 5.5 ft.
(2:01)

5.8 ft.
(1:04)



J

S

m

V

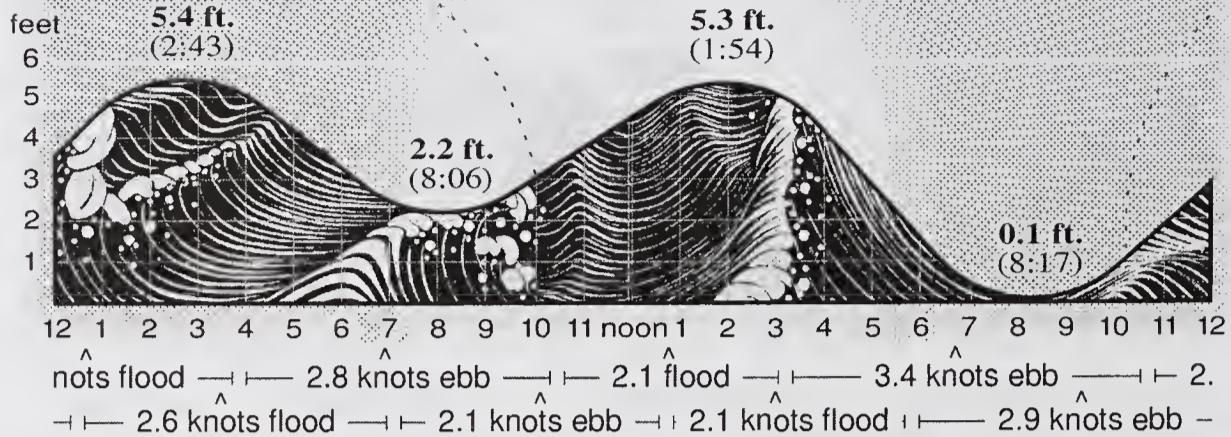
M

Venus at greatest Eastern elongation On January 12, the planet Venus will be at its highest point in the evening sky. Look to the west for the bright planet just after sunset.

MON JAN 16

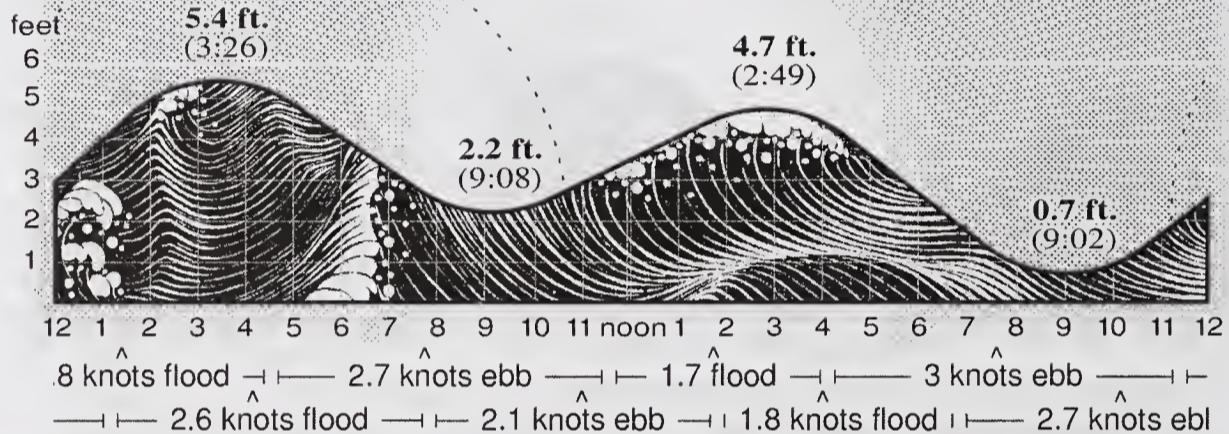
dawn 6:23 sunrise 7:24 sunset 5:16 dark 6:17
moonset 10:08 a.m. moonrise 10:07 p.m.

Martin Luther King Day



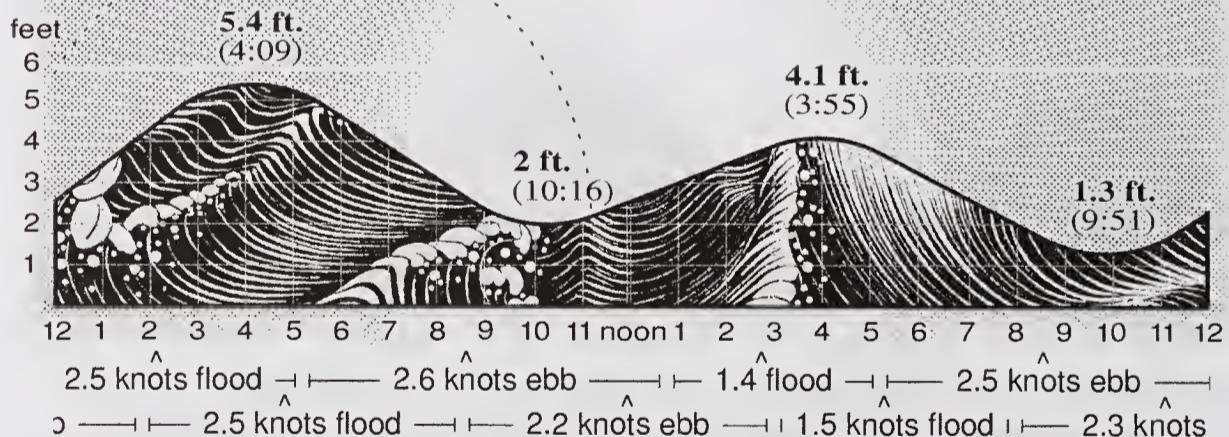
TUE JAN 17

dawn 6:23 sunrise 7:23 sunset 5:17 dark 6:18
moonset 10:41 a.m. moonrise 11:05 p.m.



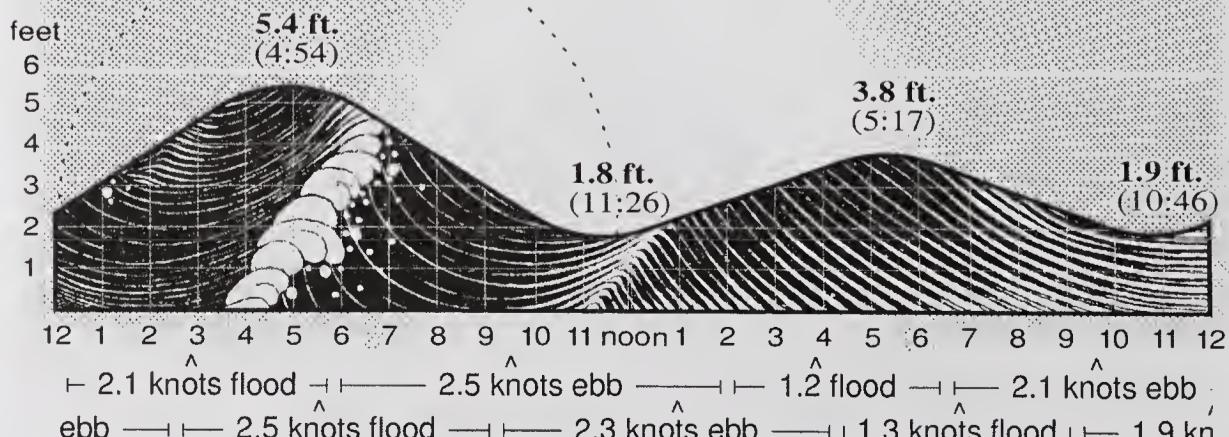
WED JAN 18

dawn 6:22 sunrise 7:23 sunset 5:18 dark 6:19
moonset 11:12 a.m.



THU JAN 19

dawn 6:22 sunrise 7:22 sunset 5:19 dark 6:20
moonrise 12:02 a.m. moonset 11:43 a.m.



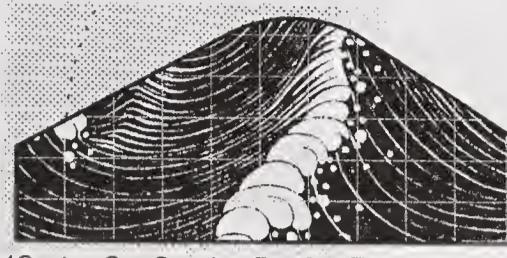
FRI JAN 20

dawn 6:21 sunrise 7:22 sunset 5:21 dark 6:21
moonrise 12:57 a.m. moonset 12:15 p.m.



feet

5.4 ft.
(5:40)



1.4 ft.
(12:31)

3.7 ft.
(6:51)

2.3 ft.
(11:47)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
—↑ 1.8 knots flood —↑ 2.5 knots ebb —↑ 1.2 knots flood —↑ 1.8 knots ebb
—↑ 2.4 knots ebb —↑ 2.5 knots flood —↑ 2.5 knots ebb —↑ 1.5 knots flood —↑ 1.6

SAT JAN 21

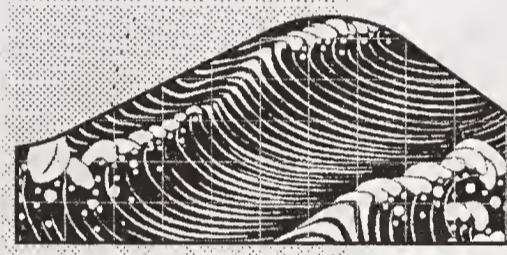
dawn 6:21 sunrise 7:21 sunset 5:22 dark 6:22
moonrise 1:52 a.m. moonset 12:49 p.m.



apogee

feet

5.5 ft.
(6:26)



1 ft.
(1:28)

3.8 ft.
(8:15)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
—↑ 1.5 knots ebb —↑ 2.6 knots flood —↑ 1.5 knots ebb —↑ 1.7 knots ebb
—↑ 3 knots ebb —↑ 2.3 knots flood —↑ 2.7 knots ebb —↑ 1.7 knots flood —↑ 1.7 knots flood

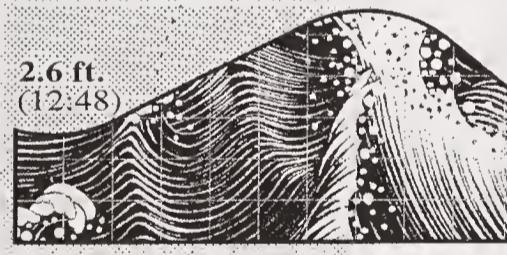
SUN JAN 22

dawn 6:21 sunrise 7:21 sunset 5:23 dark 6:23
moonrise 2:47 a.m. moonset 1:26 p.m.



feet

5.6 ft.
(7:11)



0.6 ft.
(2:17)

4.1 ft.
(9:16)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
—↑ 1.5 knots ebb —↑ 2.8 knots ebb —↑ 1.8 knots ebb —↑ 1.8 knots ebb
—↑ 1.4 knots ebb —↑ 2.3 knots flood —↑ 2.8 knots ebb —↑ 2 knots flood

J

S

m

v

M

MON JAN 23

dawn 6:20 sunrise 7:20 sunset 5:24 dark 6:24
moonrise 3:40 a.m. moonset 2:06 p.m.



5.8 ft.
(7:54)

feet

6

5

4

3

2

1



12 1 2 3 4 5 6 7 8 9 10 noon 1 2 3 4 5 6 7 8 9 10 11 12
knots ebb → 1.5 flood → 3 knots ebb → 2.1 knots flood →
→ 1.3 knots ebb → 2.4 knots flood → 2.9 knots ebb → 2.1 knots fl

TUE JAN 24

dawn 6:20 sunrise 7:20 sunset 5:25 dark 6:25
moonrise 4:33 a.m. moonset 2:51 p.m.



5.9 ft.
(8:36)

feet

6

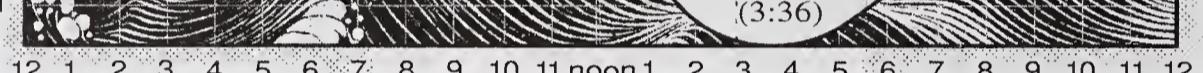
5

4

3

2

1



12 1 2 3 4 5 6 7 8 9 10 noon 1 2 3 4 5 6 7 8 9 10 11 12
1.9 knots ebb → 1.6 flood → 3.2 knots ebb → 2.4 knots flood →
→ 1.3 ebb → 2.4 knots flood → 2.9 knots ebb → 2.2 knots

WED JAN 25

dawn 6:19 sunrise 7:19 sunset 5:26 dark 6:26
moonrise 5:24 a.m. moonset 3:40 p.m.



South

6.1 ft.
(9:16)

feet

6

5

4

3

2

1



12 1 2 3 4 5 6 7 8 9 10 noon 1 2 3 4 5 6 7 8 9 10 11 12
→ 2 knots ebb → 1.8 flood → 3.4 knots ebb → 2.6 knots flood →
→ 1.4 ebb → 2.5 knots flood → 2.8 knots ebb → 2.3 knots

THU JAN 26

dawn 6:19 sunrise 7:18 sunset 5:27 dark 6:27
moonrise 6:12 a.m. moonset 4:34 p.m.



6.1 ft.
(9:55)

feet

6

5

4

3

2

1

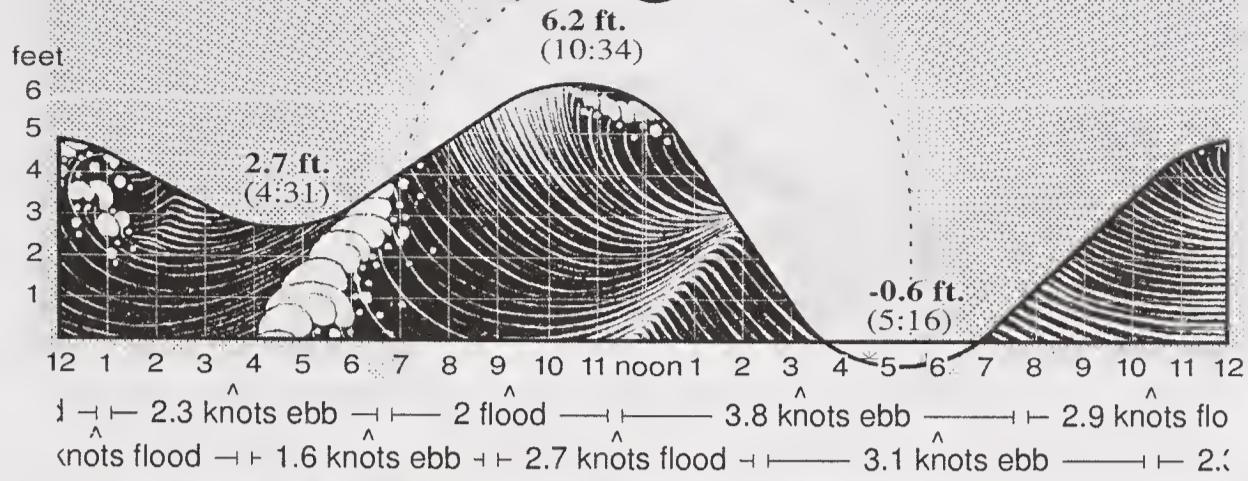


12 1 2 3 4 5 6 7 8 9 10 noon 1 2 3 4 5 6 7 8 9 10 11 12
→ 2.2 knots ebb → 1.9 flood → 3.6 knots ebb → 2.7 knots flood →
→ 1.5 knots ebb → 2.6 knots flood → 2.9 knots ebb → 2.3 knots

FRI JAN 27

dawn 6:18 sunrise 7:18 sunset 5:28 dark 6:28
moonrise 6:57 a.m. moonset 5:31 p.m.

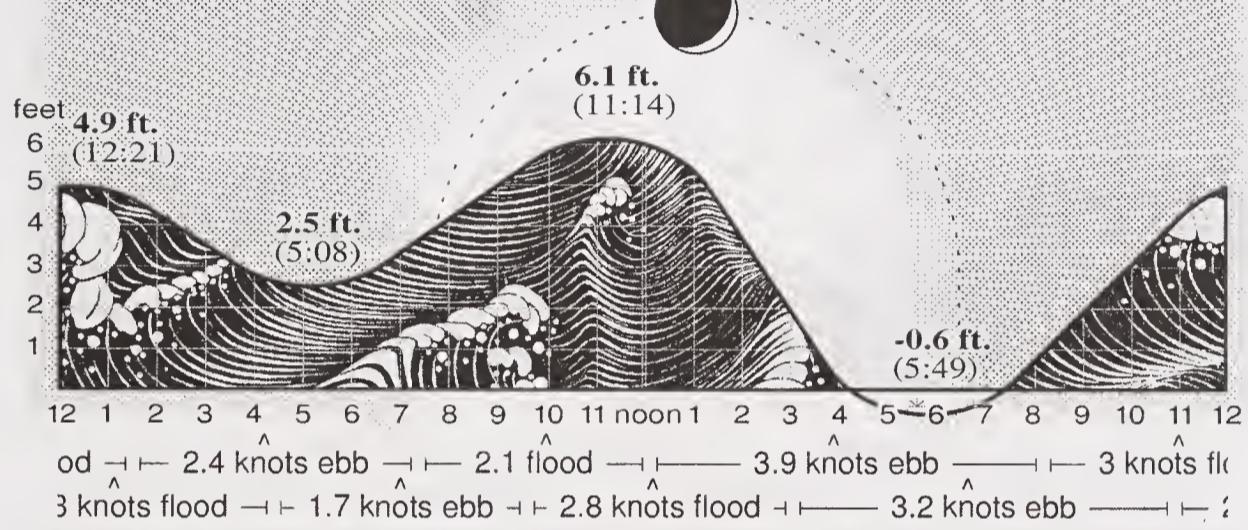
New Moon 4:07 p.m.



SAT JAN 28

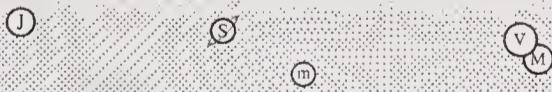
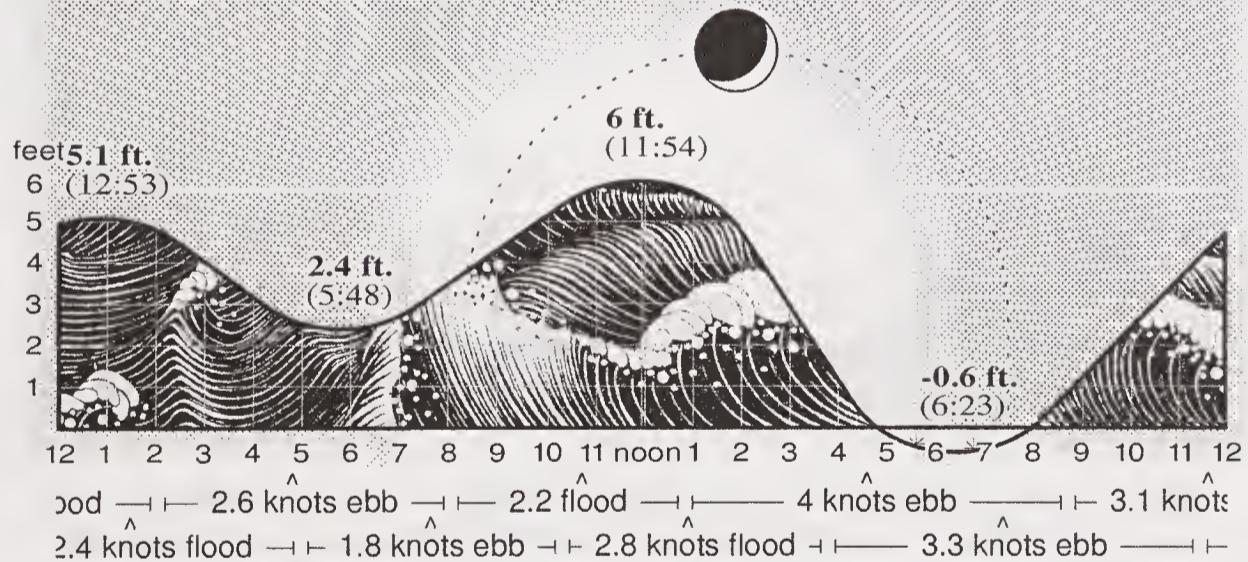
dawn 6:17 sunrise 7:17 sunset 5:29 dark 6:29
moonrise 7:38 a.m. moonset 6:32 p.m.

Chinese New Year



SUN JAN 29

dawn 6:17 sunrise 7:16 sunset 5:31 dark 6:30
moonrise 8:17 a.m. moonset 7:34 p.m.



MON JAN 30

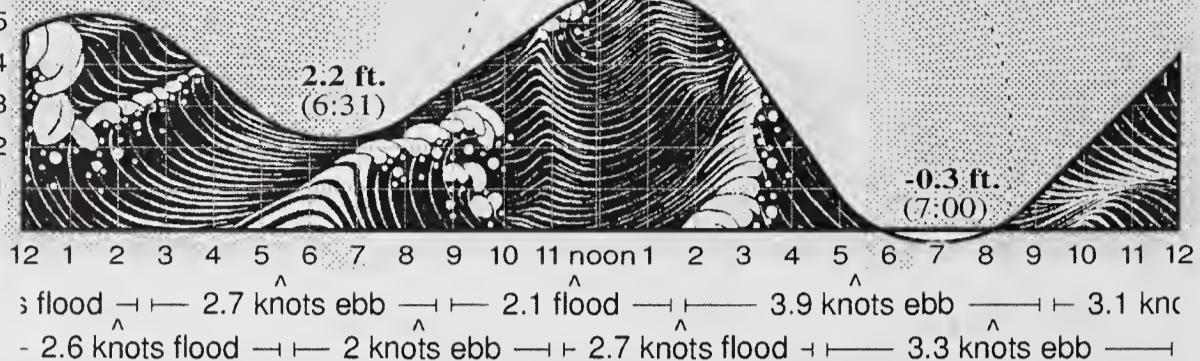
dawn 6:16 sunrise 7:15 sunset 5:32 dark 6:31
moonrise 8:54 a.m. moonset 8:37 p.m.



feet: 5.2 ft.
(1:27)

5.8 ft.
(12:37)

-0.3 ft.
(7:00)



TUE JAN 31

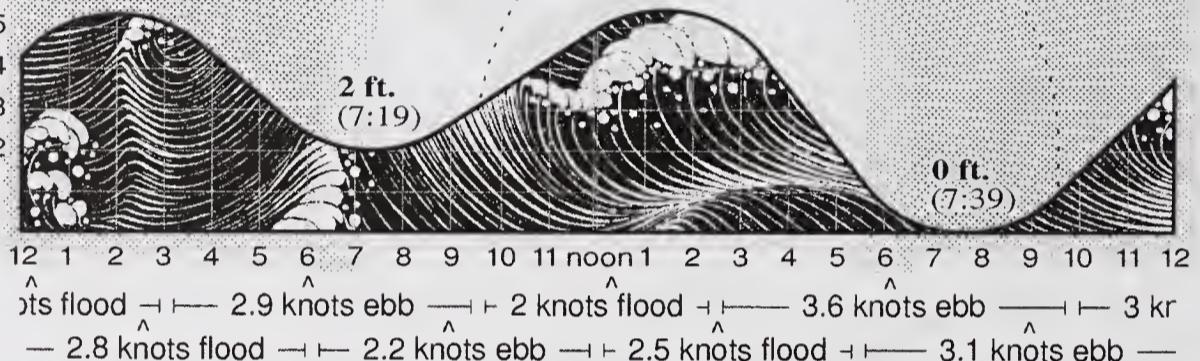
dawn 6:15 sunrise 7:14 sunset 5:33 dark 6:32
moonrise 9:30 a.m. moonset 9:41 p.m.



feet: 5.3 ft.
(2:02)

5.4 ft.
(1:25)

0 ft.
(7:39)



WED FEB 1

dawn 6:15 sunrise 7:14 sunset 5:34 dark 6:33
moonrise 10:05 a.m. moonset 10:46 p.m.

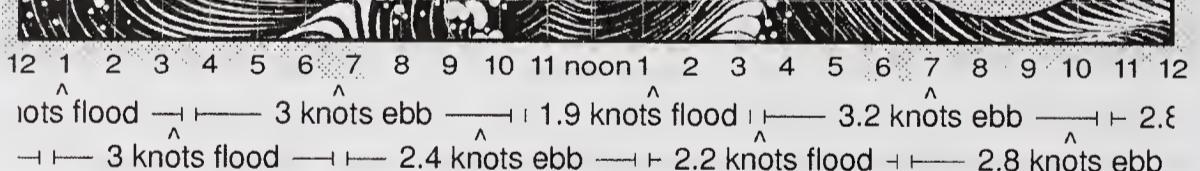
equator

feet: 5.5 ft.
(2:40)

4.9 ft.
(2:20)

0.6 ft.
(8:22)

1.8 ft.
(8:14)



THU FEB 2

dawn 6:14 sunrise 7:13 sunset 5:35 dark 6:34
moonrise 10:41 a.m. moonset 11:52 p.m.

Groundhog Day

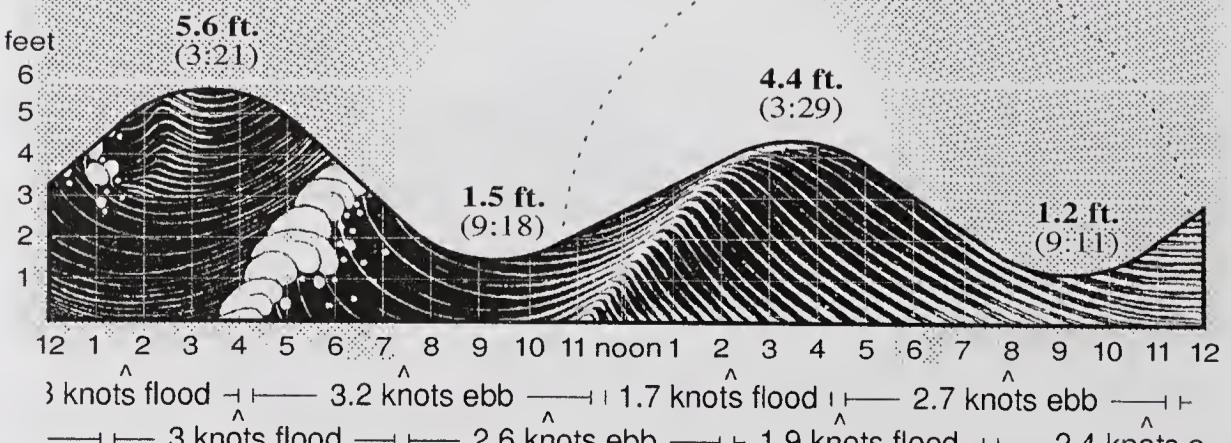


feet: 5.6 ft.
(3:21)

4.4 ft.
(3:29)

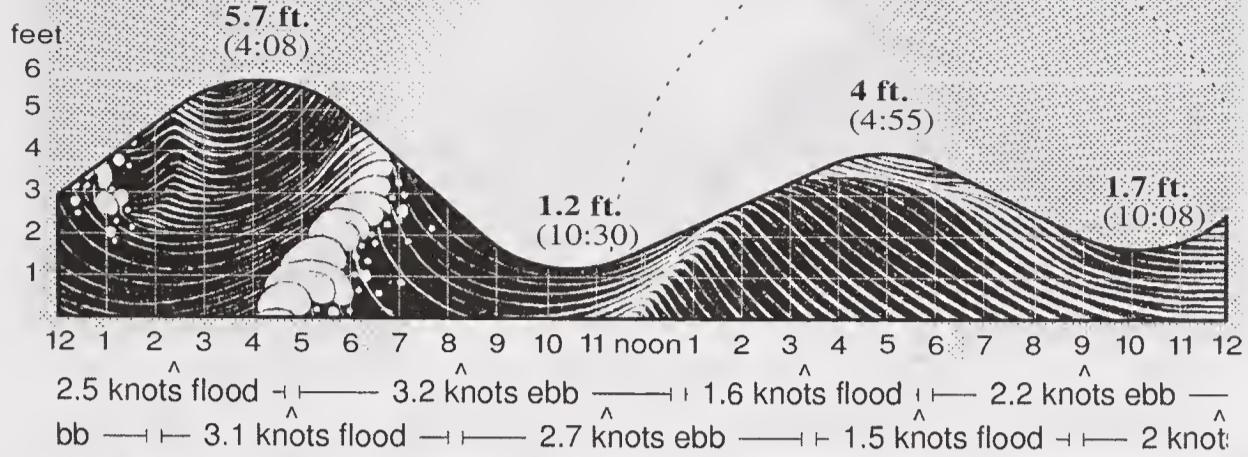
1.2 ft.
(9:11)

1.5 ft.
(9:18)



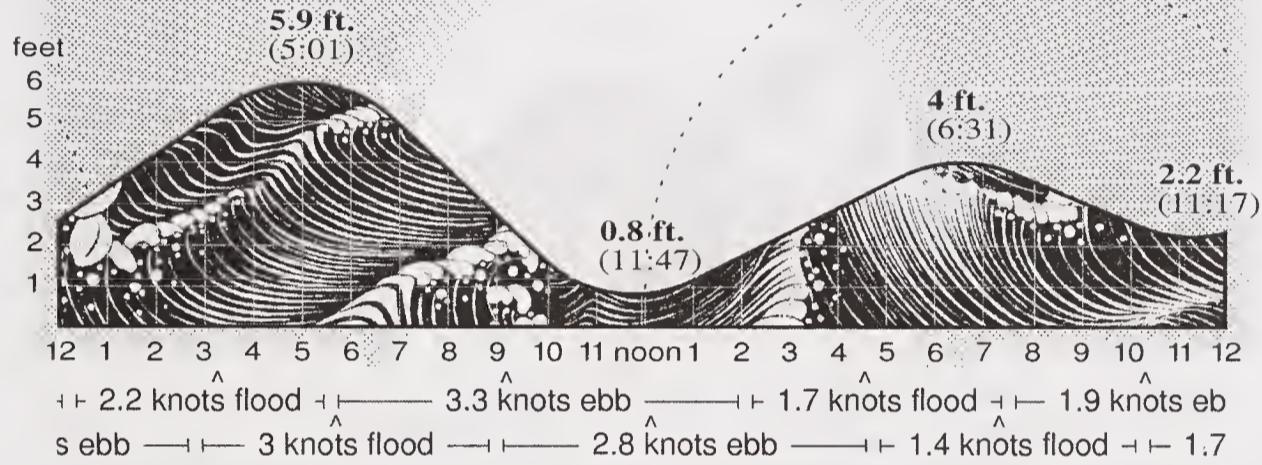
FRI FEB 3

dawn 6:13 sunrise 7:12 sunset 5:36 dark 6:35
moonrise 11:19 a.m.



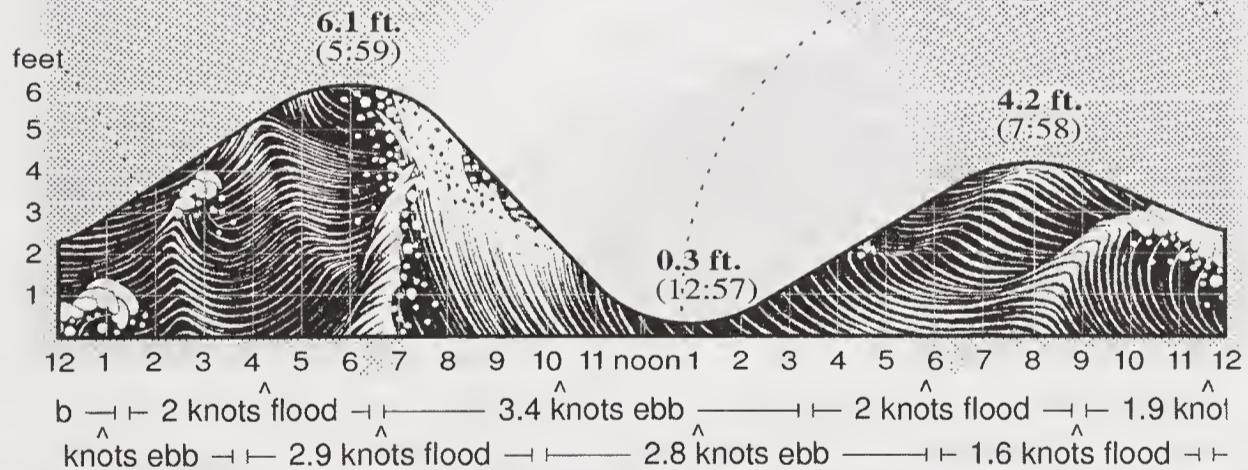
SAT FEB 4

dawn 6:12 sunrise 7:11 sunset 5:37 dark 6:36
moonset 12:59 a.m. moonrise 12:01 p.m.



SUN FEB 5

dawn 6:11 sunrise 7:10 sunset 5:38 dark 6:37
moonset 2:05 a.m. moonrise 12:47 p.m.



J

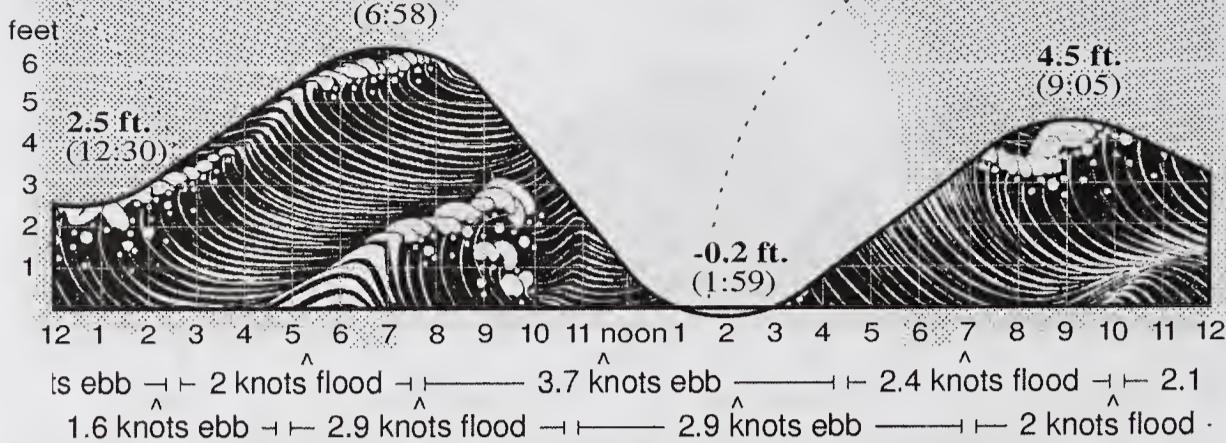
S

m

V
M

MON FEB 6

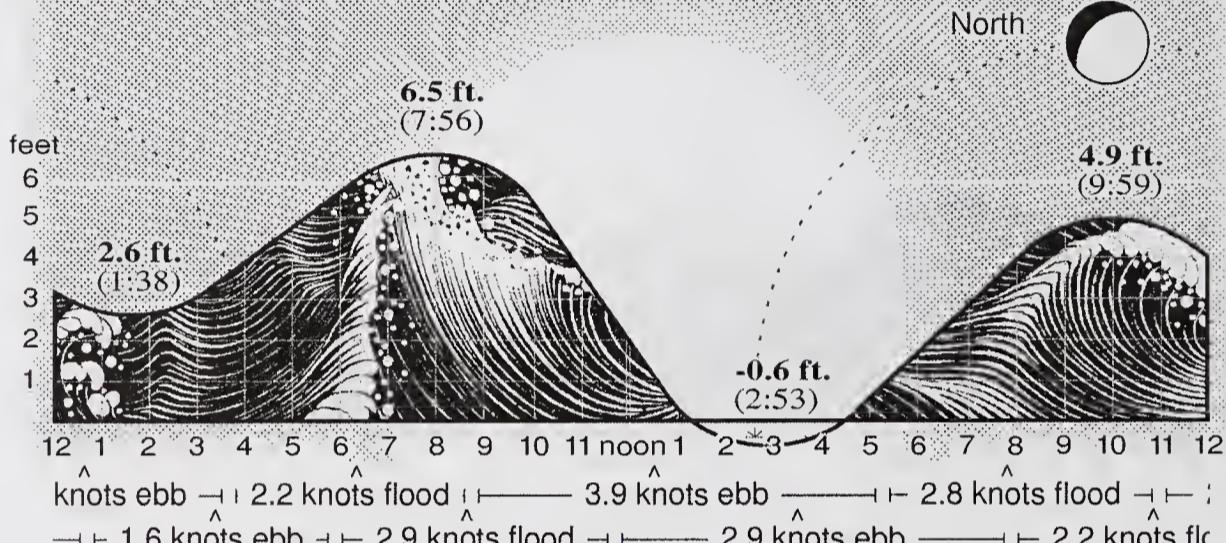
dawn 6:10 sunrise 7:09 sunset 5:39 dark 6:38
moonset 3:10 a.m. moonrise 1:38 p.m.



TUE FEB 7

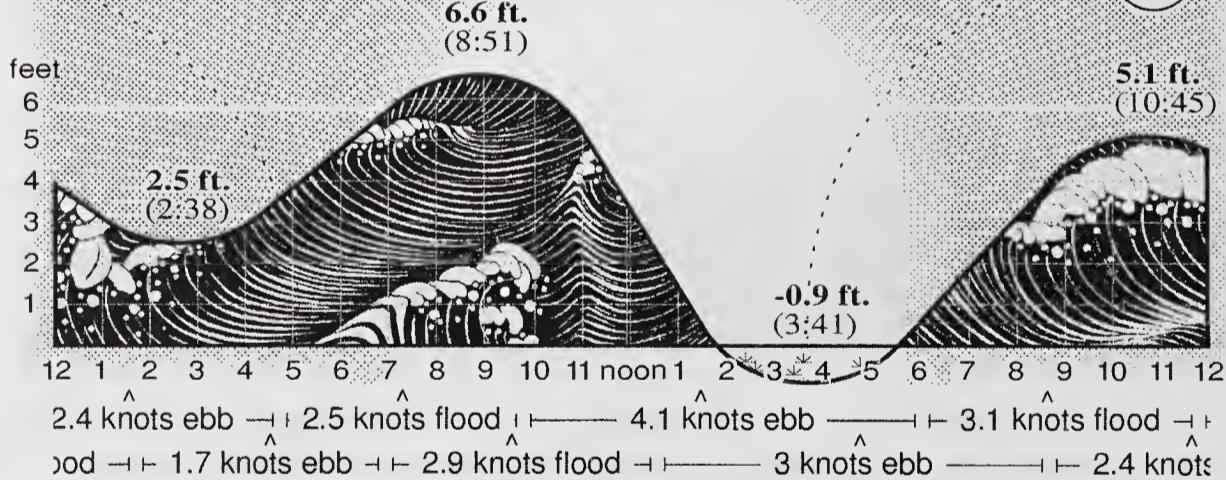
dawn 6:10 sunrise 7:08 sunset 5:41 dark 6:39
moonset 4:12 a.m. moonrise 2:35 p.m.

North



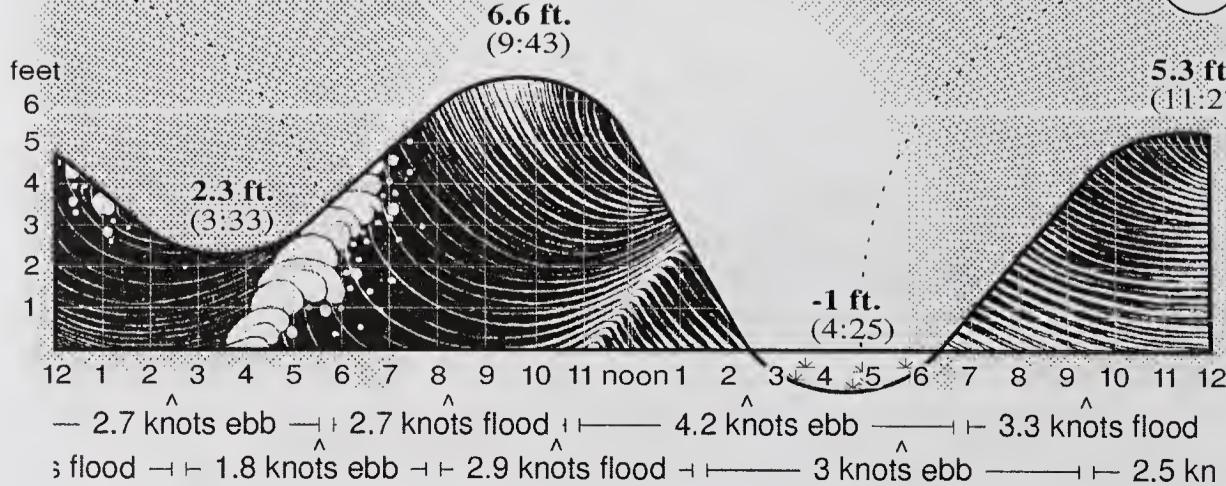
WED FEB 8

dawn 6:09 sunrise 7:07 sunset 5:42 dark 6:40
moonset 5:09 a.m. moonrise 3:36 p.m.



THU FEB 9

dawn 6:08 sunrise 7:06 sunset 5:43 dark 6:41
moonset 6:01 a.m. moonrise 4:40 p.m.



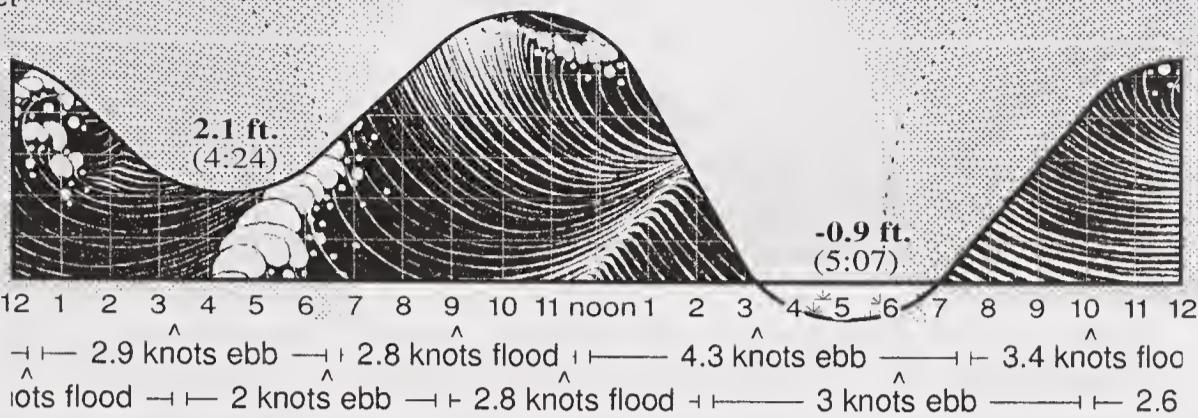
FRI FEB 10

dawn 6:07 sunrise 7:05 sunset 5:44 dark 6:42
moonset 6:47 a.m. moonrise 5:45 p.m.

Full Moon 4:33 p.m.

feet

6.5 ft.
(10:32)

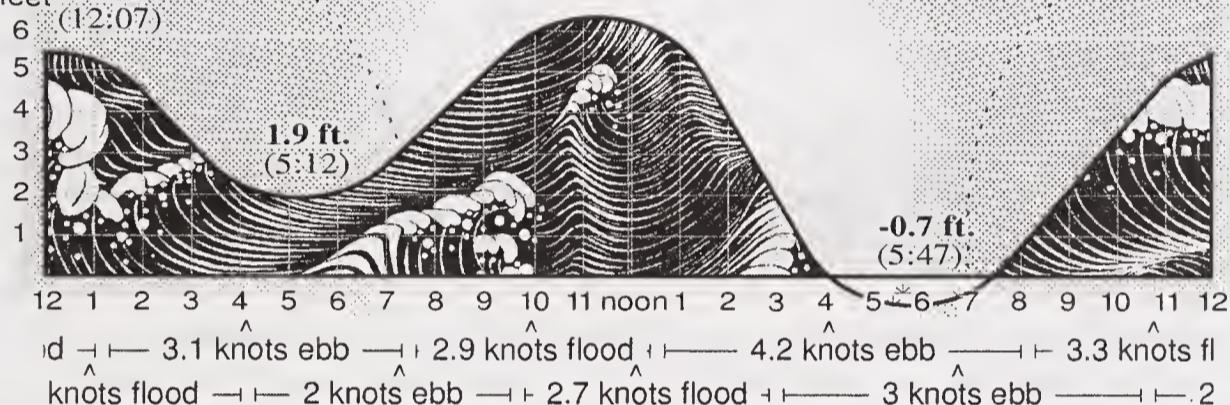


SAT FEB 11

dawn 6:06 sunrise 7:04 sunset 5:45 dark 6:43
moonset 7:27 a.m. moonrise 6:48 p.m.

feet 5.4 ft.
(12:07)

6.3 ft.
(11:19)

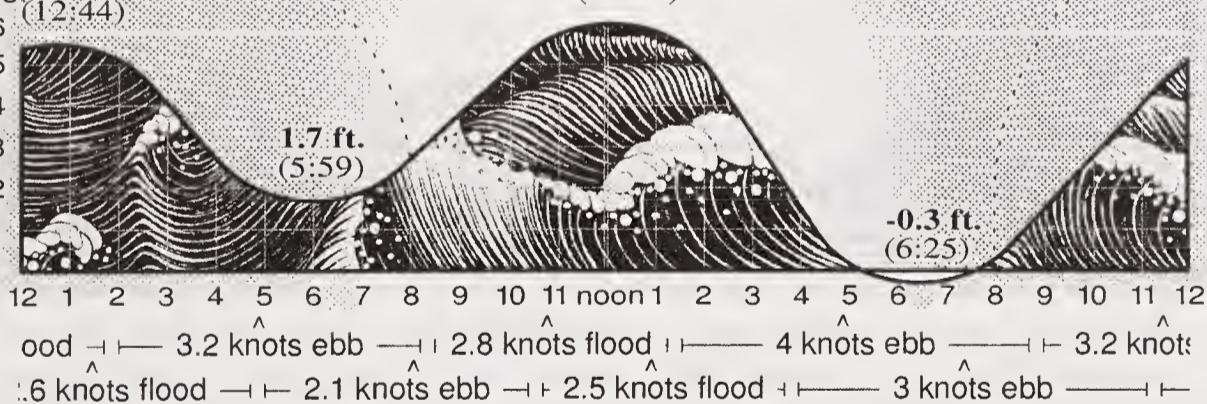


SUN FEB 12

dawn 6:05 sunrise 7:03 sunset 5:46 dark 6:44
moonset 8:04 a.m. moonrise 7:50 p.m.

feet 5.5 ft.
(12:44)

6 ft.
(12:05)



J

S

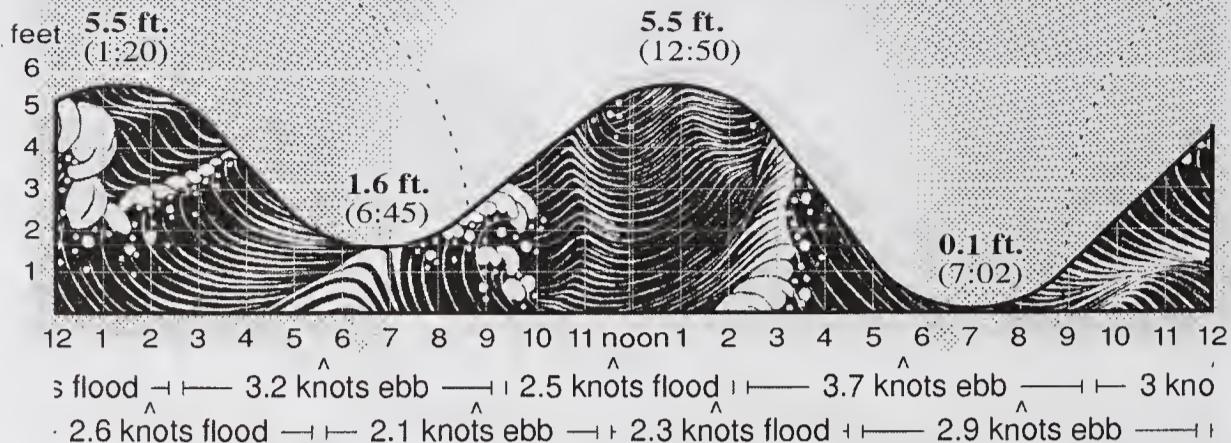
m

V

M

Penumbral Lunar Eclipse a penumbral lunar eclipse occurs when the moon passes through the Earth's partial shadow, or penumbral, causing the moon to darken slightly. This eclipse will only be visible from eastern Canada in the northern hemisphere.

MON FEB 13 dawn 6:04 sunrise 7:01 sunset 5:47 dark 6:45
moonset 8:38 a.m. moonrise 8:50 p.m.

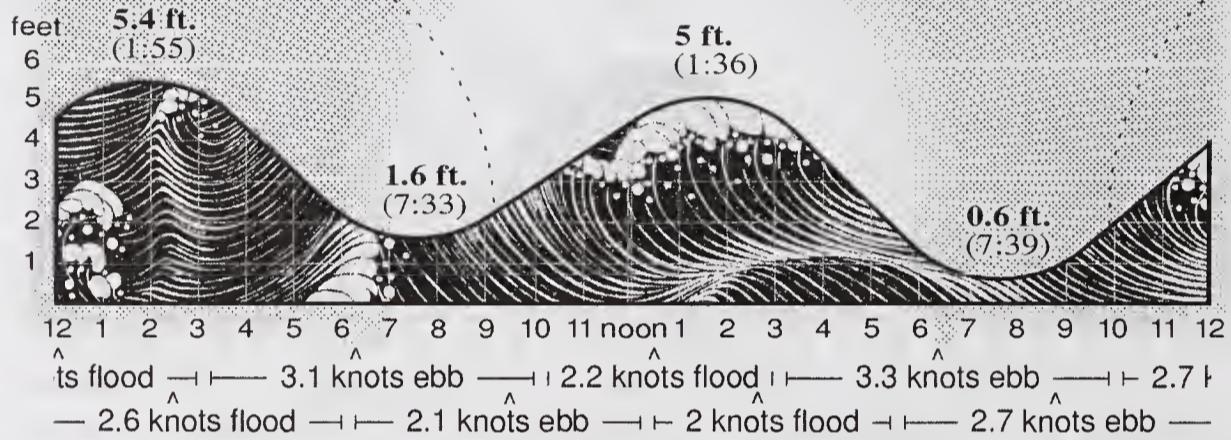


TUE FEB 14 dawn 6:03 sunrise 7:00 sunset 5:48 dark 6:46
moonset 9:10 a.m. moonrise 9:49 p.m.

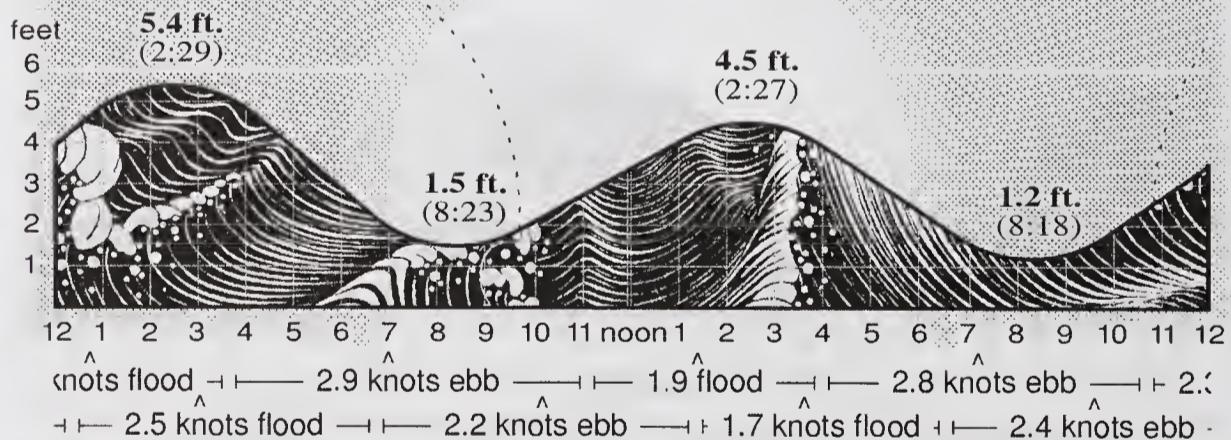


equator

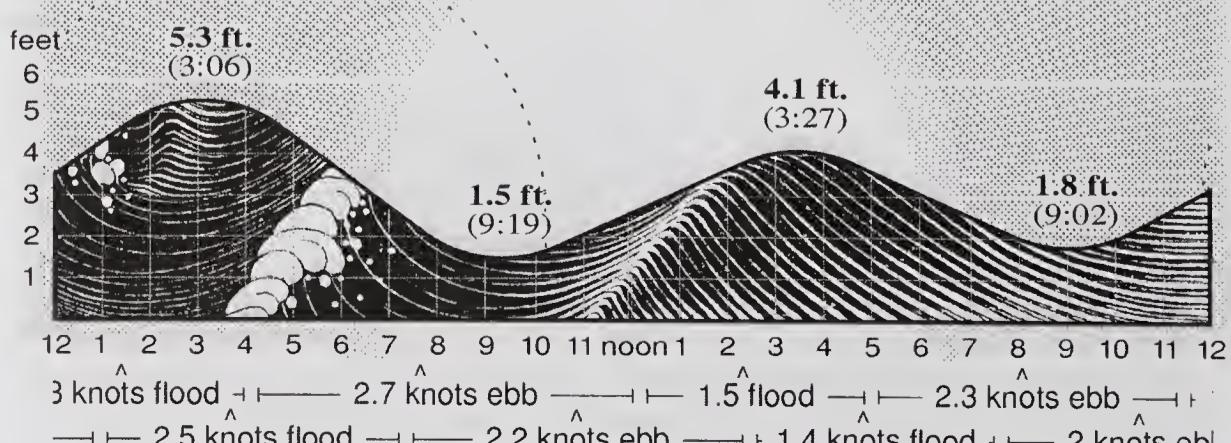
Valentine's Day



WED FEB 15 dawn 6:02 sunrise 6:59 sunset 5:49 dark 6:47
moonset 9:42 a.m. moonrise 10:46 p.m.



THU FEB 16 dawn 6:00 sunrise 6:58 sunset 5:50 dark 6:48
moonset 10:14 a.m. moonrise 11:41 p.m.



FRI FEB 17

dawn 5:59 sunrise 6:57 sunset 5:51 dark 6:49
moonset 10:47 a.m.

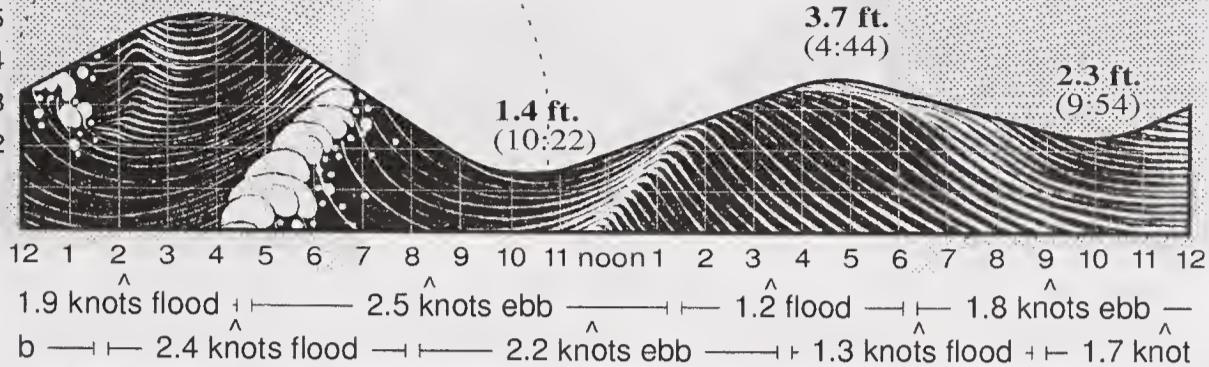


feet

5.2 ft.
(3:45)

3.7 ft.
(4:44)

2.3 ft.
(9:54)



SAT FEB 18

dawn 5:58 sunrise 6:55 sunset 5:53 dark 6:50
moonrise 12:36 a.m. moonset 11:23 a.m.



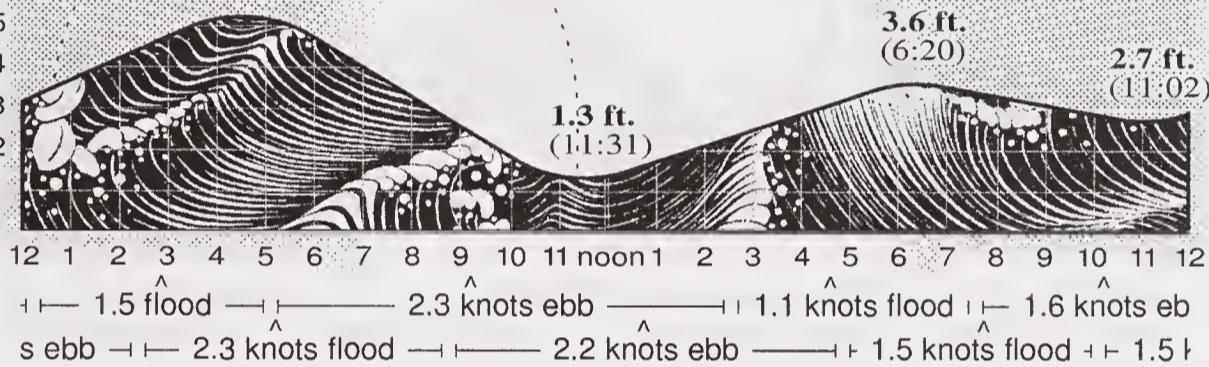
apogee

feet

5.2 ft.
(4:31)

3.6 ft.
(6:20)

2.7 ft.
(11:02)



SUN FEB 19

dawn 5:57 sunrise 6:54 sunset 5:54 dark 6:51
moonrise 1:30 a.m. moonset 12:01 p.m.

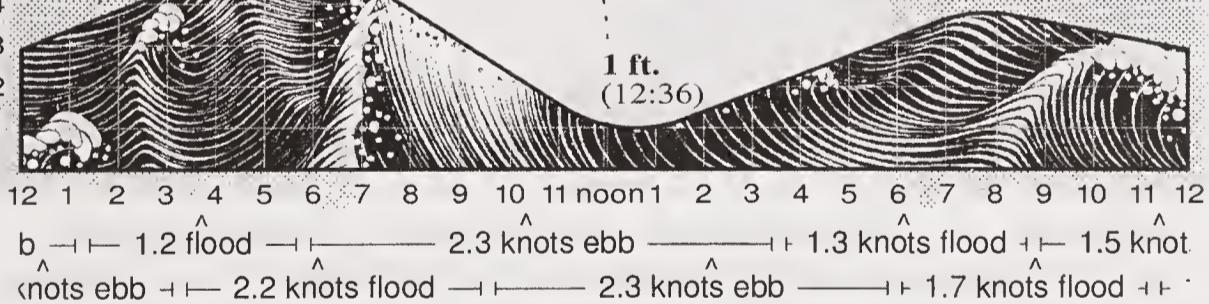


feet

5.2 ft.
(5:24)

3.8 ft.
(7:49)

1 ft.
(12:36)



J

S

m

V

M

MON FEB 20

dawn 5:56 sunrise 6:53 sunset 5:55 dark 6:52
moonrise 2:23 a.m. moonset 12:44 p.m.

Presidents' Day



TUE FEB 21

dawn 5:55 sunrise 6:52 sunset 5:56 dark 6:53
moonrise 3:14 a.m. moonset 1:31 p.m.



South

WED FEB 22

dawn 5:53 sunrise 6:50 sunset 5:57 dark 6:54
moonrise 4:03 a.m. moonset 2:22 p.m.



THU FEB 23

dawn 5:52 sunrise 6:49 sunset 5:58 dark 6:55
moonrise 4:49 a.m. moonset 3:18 p.m.



FRI FEB 24

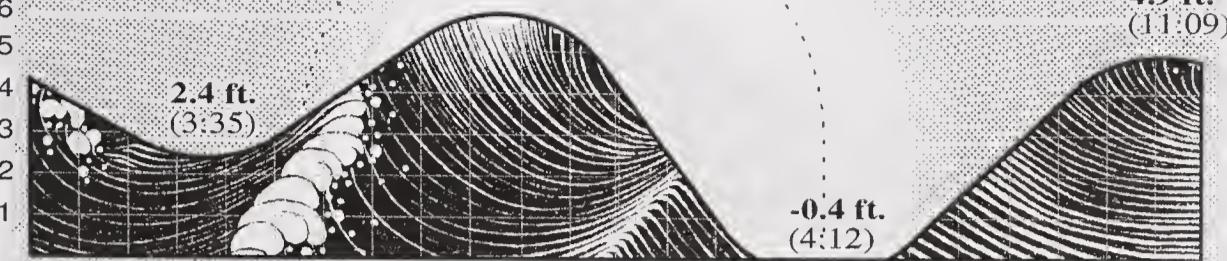
dawn 5:51 sunrise 6:48 sunset 5:59 dark 6:56
moonrise 5:33 a.m. moonset 4:18 p.m.



feet

5.9 ft.
(9:36)

4.9 ft.
(11:09)



SAT FEB 25

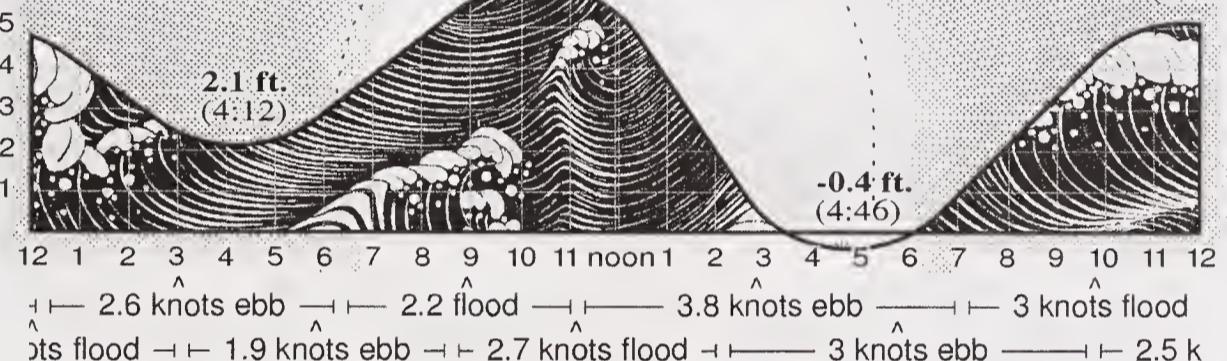
dawn 5:49 sunrise 6:46 sunset 6:00 dark 6:57
moonrise 6:13 a.m. moonset 5:20 p.m.



feet

6 ft.
(10:19)

5.1 ft.
(11:39)



SUN FEB 26

dawn 5:48 sunrise 6:45 sunset 6:01 dark 6:58
moonrise 6:52 a.m. moonset 6:24 p.m.

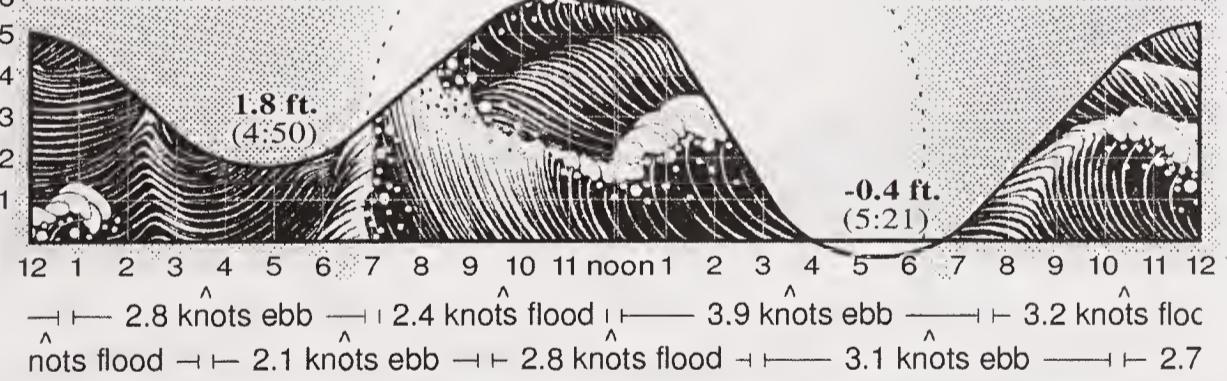
New Moon 6:58 a.m.



feet

6 ft.
(11:03)

-0.4 ft.
(5:21)



(J)

(S)

(V) (M)

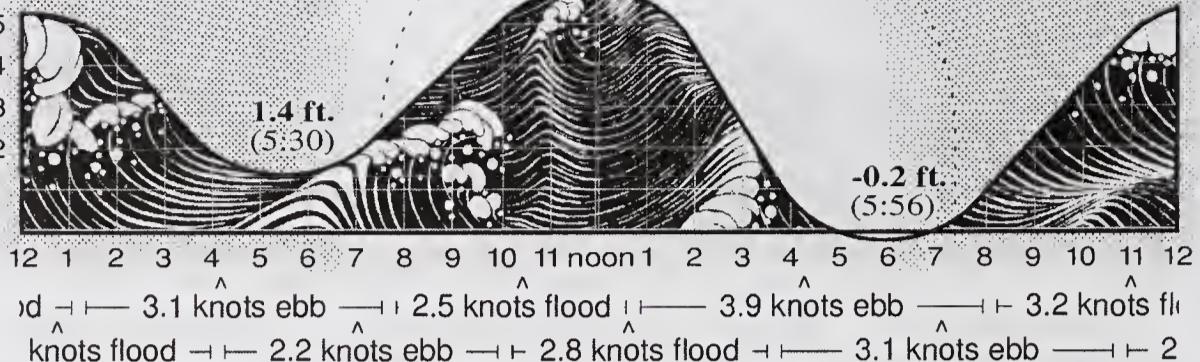
MON FEB 27

dawn 5:47 sunrise 6:44 sunset 6:02 dark 6:59
moonrise 7:29 a.m. moonset 7:30 p.m.

feet 5.3 ft.
6 (12:11)

5.9 ft.
(11:47)

-0.2 ft.
(5:56)



TUE FEB 28

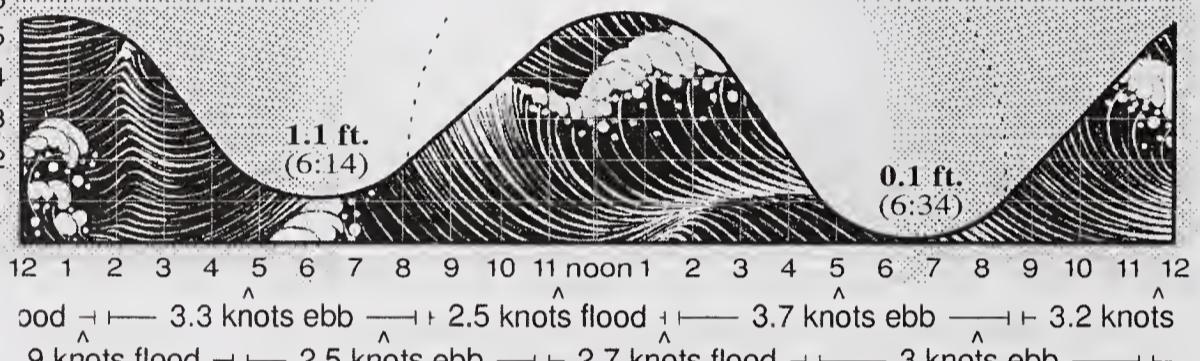
dawn 5:46 sunrise 6:42 sunset 6:03 dark 7:00
moonrise 8:05 a.m. moonset 8:36 p.m.

equator

feet 5.5 ft.
6 (12:44)

5.6 ft.
(12:35)

0.1 ft.
(6:34)



WED MAR 1

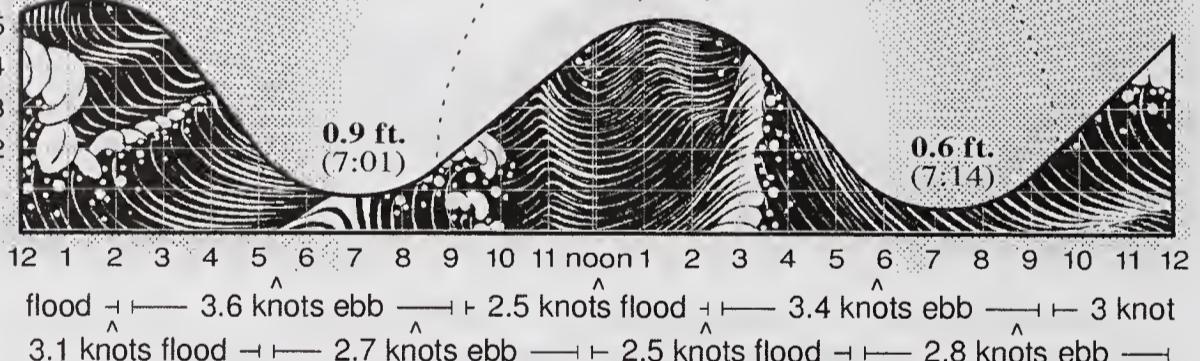
dawn 5:44 sunrise 6:41 sunset 6:04 dark 7:01
moonrise 8:42 a.m. moonset 9:43 p.m.

Ash Wednesday

feet 5.7 ft.
6 (1:18)

5.2 ft.
(1:27)

0.6 ft.
(7:14)



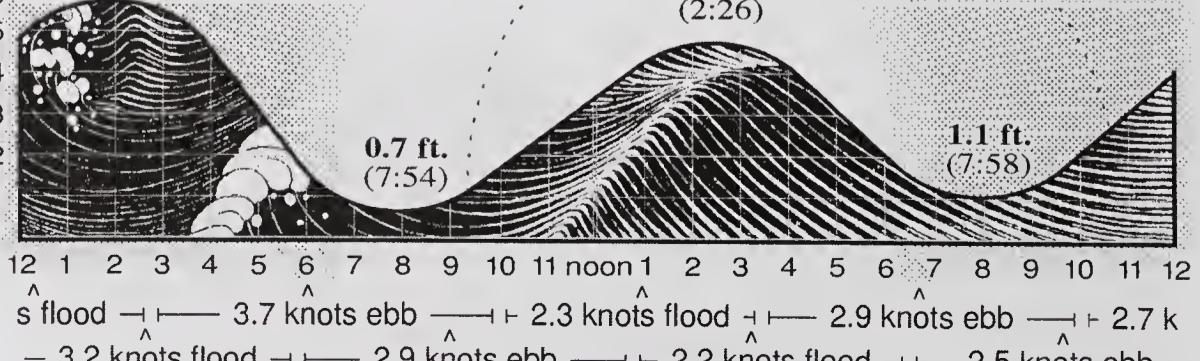
THU MAR 2

dawn 5:43 sunrise 6:39 sunset 6:05 dark 7:02
moonrise 9:20 a.m. moonset 10:51 p.m.

feet 5.8 ft.
6 (1:56)

4.8 ft.
(2:26)

1.1 ft.
(7:58)

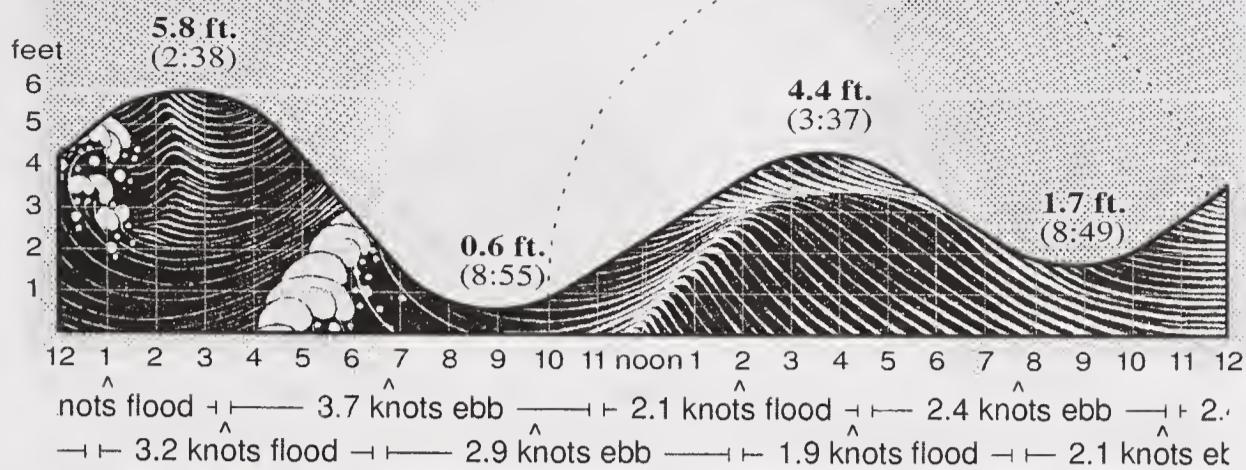


FRI MAR 3

dawn 5:41 sunrise 6:38 sunset 6:06 dark 7:03
moonrise 10:01 a.m. moonset 11:58 p.m.

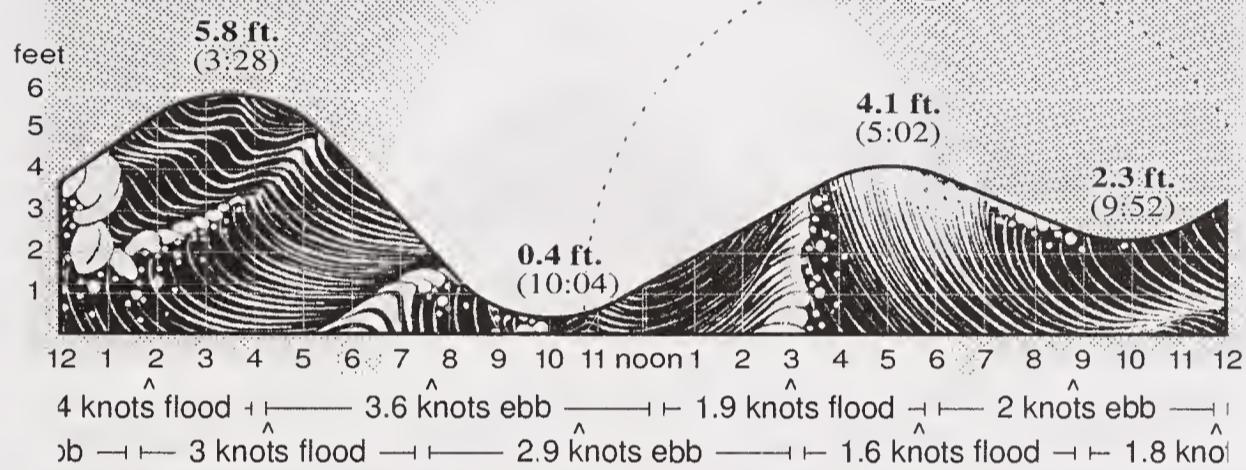


perigee



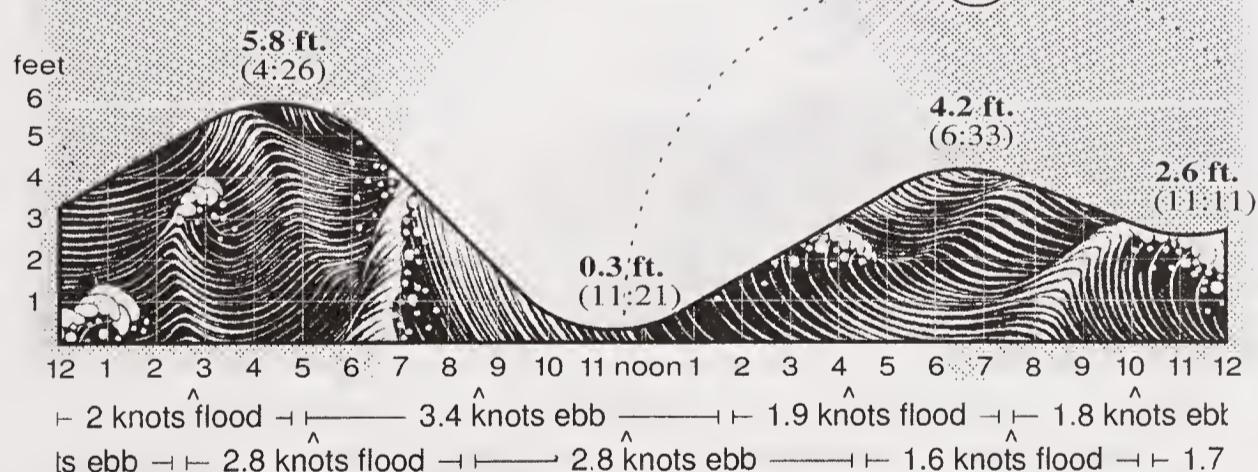
SAT MAR 4

dawn 5:40 sunrise 6:37 sunset 6:07 dark 7:04
moonrise 10:45 a.m.



SUN MAR 5

dawn 5:39 sunrise 6:35 sunset 6:08 dark 7:05
moonset 1:03 a.m. moonrise 11:35 a.m.



J

58

34

10

MON MAR 6

dawn 5:37 sunrise 6:34 sunset 6:09 dark 7:05
moonset 2:05 a.m. moonrise 12:29 p.m.

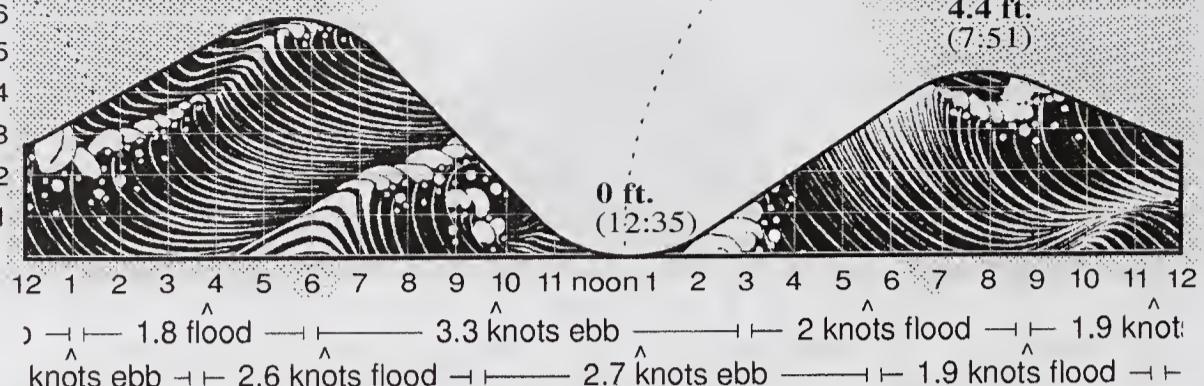


feet

5.8 ft.
(5:32)

0 ft.
(12:35)

4.4 ft.
(7:51)



TUE MAR 7

dawn 5:36 sunrise 6:32 sunset 6:10 dark 7:06
moonset 3:03 a.m. moonrise 1:27 p.m.

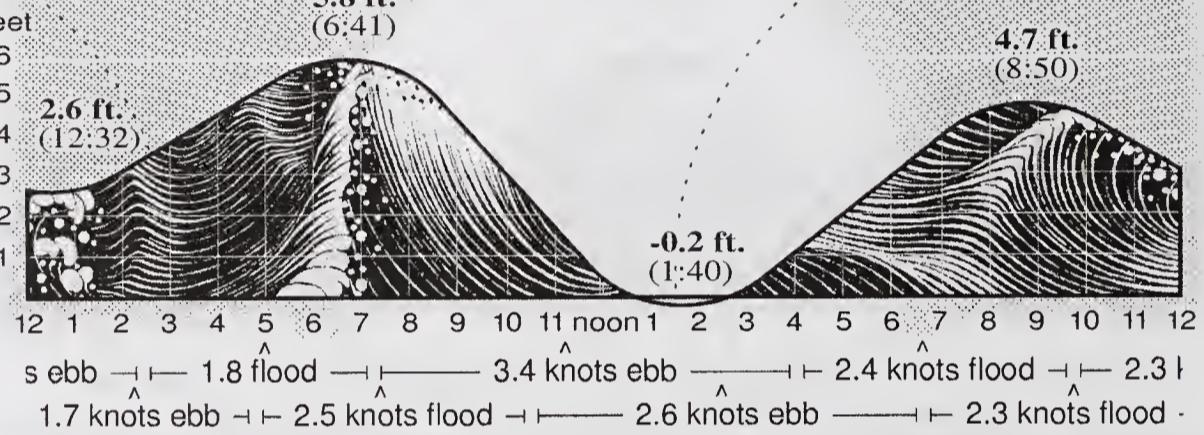


feet

5.8 ft.
(6:41)

-0.2 ft.
(1:40)

4.7 ft.
(8:50)



WED MAR 8

dawn 5:34 sunrise 6:31 sunset 6:11 dark 7:07
moonset 3:55 a.m. moonrise 2:28 p.m.

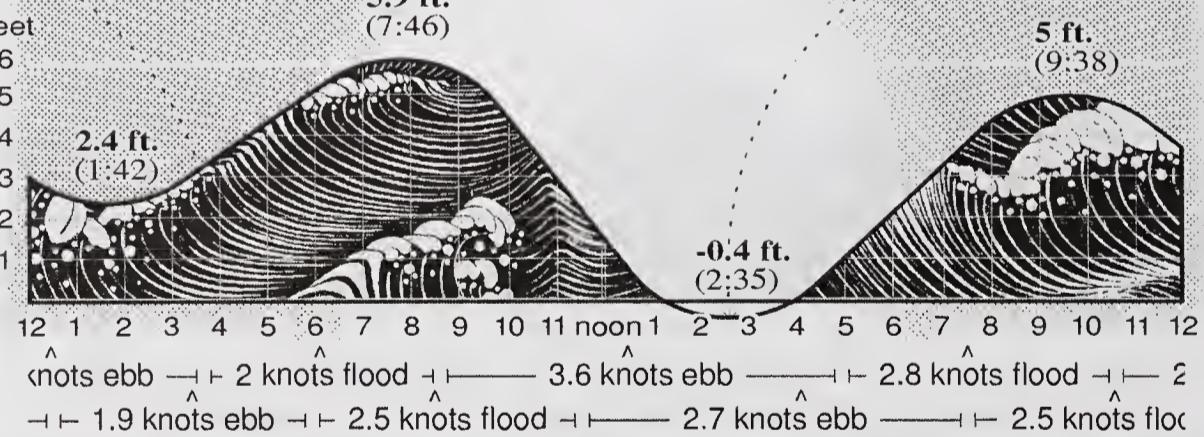


feet

5.9 ft.
(7:46)

-0.4 ft.
(2:35)

5 ft.
(9:38)



THU MAR 9

dawn 5:33 sunrise 6:29 sunset 6:12 dark 7:08
moonset 4:42 a.m. moonrise 3:31 p.m.

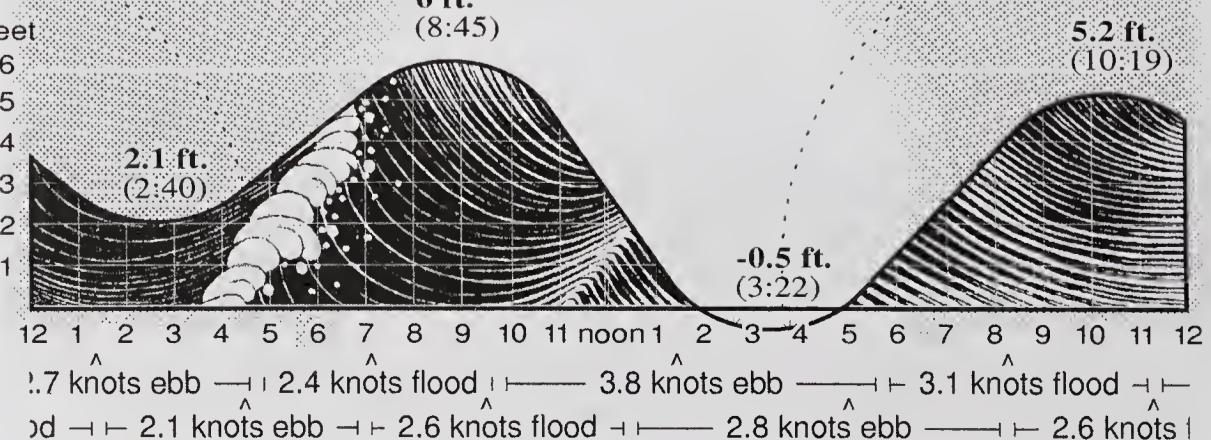


feet

6 ft.
(8:45)

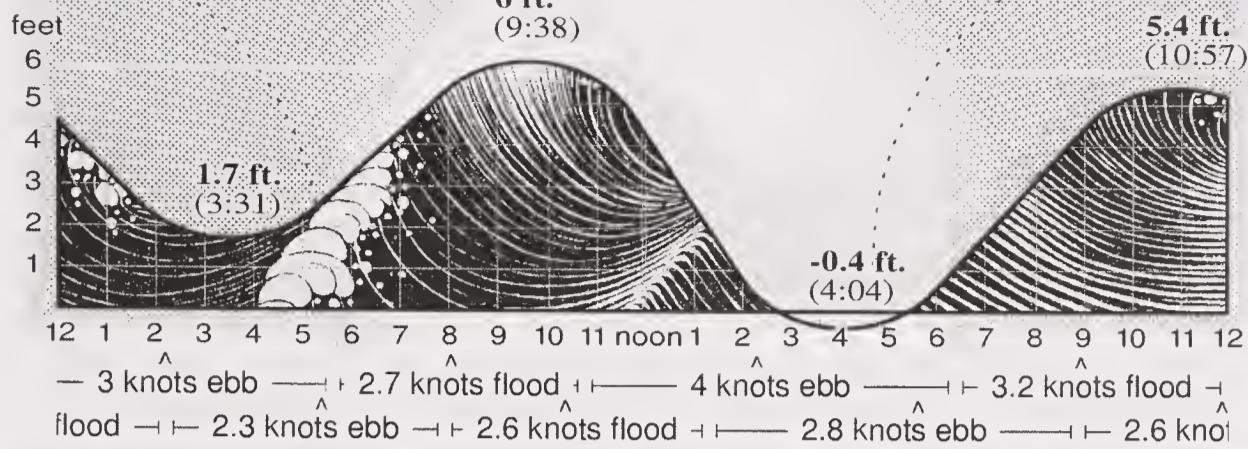
-0.5 ft.
(3:22)

5.2 ft.
(10:19)



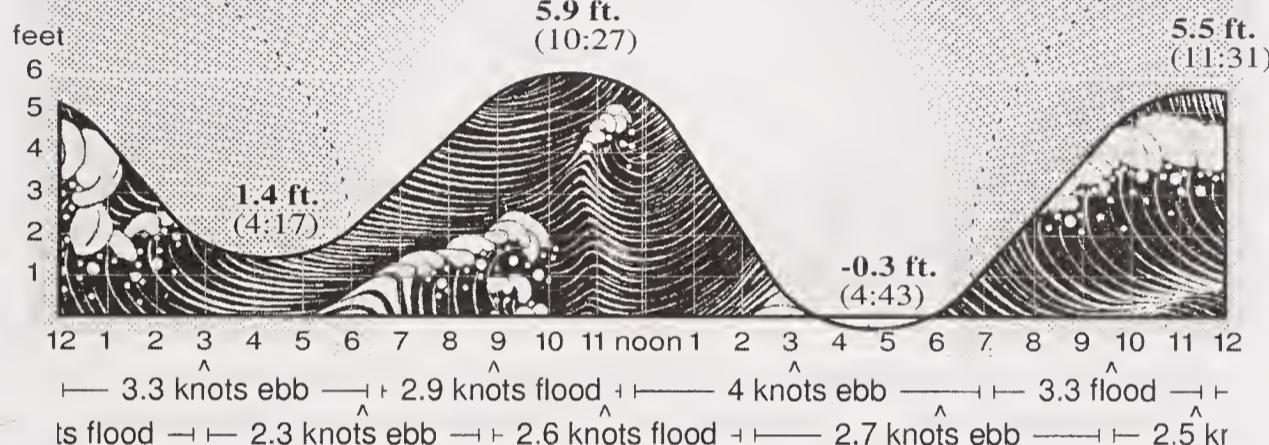
FRI MAR 10

dawn 5:31 sunrise 6:28 sunset 6:13 dark 7:09
moonset 5:23 a.m. moonrise 4:34 p.m.



SAT MAR 11

dawn 5:30 sunrise 6:26 sunset 6:14 dark 7:10
moonset 6:01 a.m. moonrise 5:36 p.m.

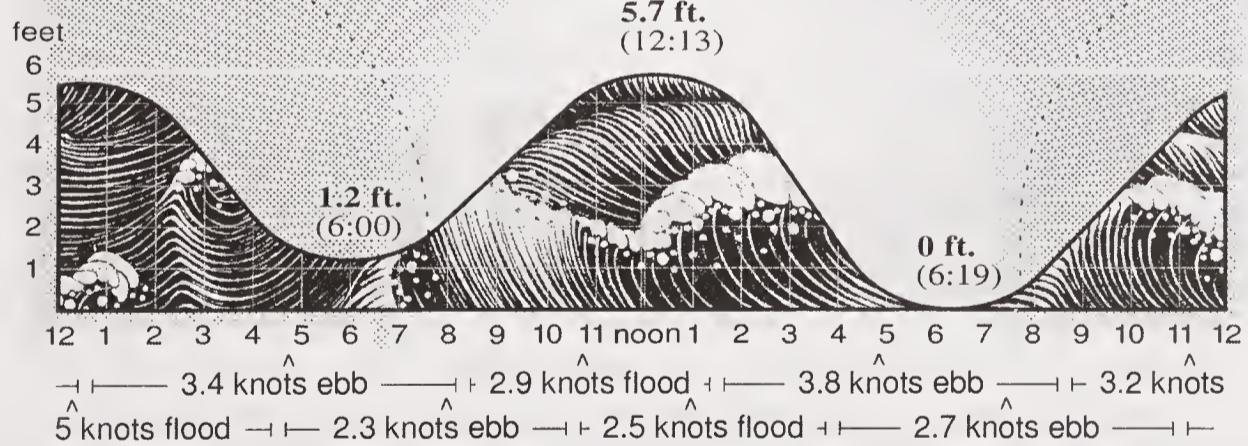


SUN MAR 12

dawn 6:28 sunrise 7:25 sunset 7:15 dark 8:11
moonset 7:35 a.m. moonrise 7:36 p.m.

Full Moon 7:54 a.m.

Daylight Saving Time Begins



MON MAR 13

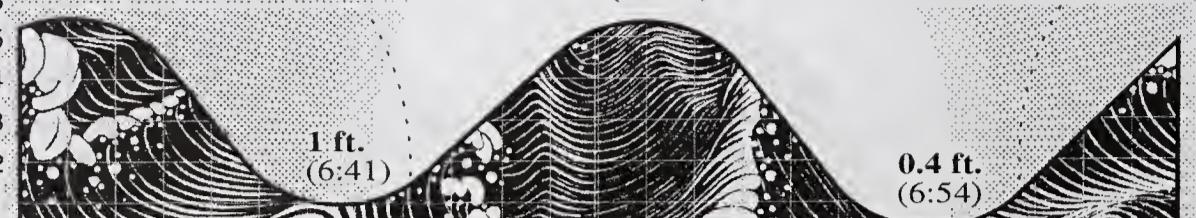
dawn 6:27 sunrise 7:23 sunset 7:16 dark 8:12
moonset 8:08 a.m. moonrise 8:35 p.m.



equator

feet 5.5 ft.
(1:04)

5.4 ft.
(12:57)



12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
flood — 3.5 knots ebb — 2.8 knots flood — 3.6 knots ebb — 3 knots
2.5 knots flood — 2.3 knots ebb — 2.4 knots flood — 2.5 knots ebb —

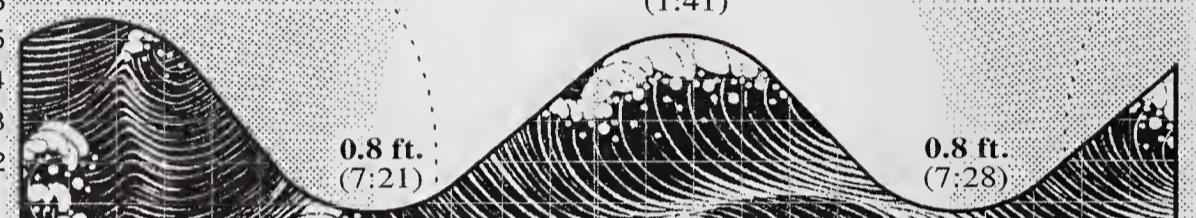
TUE MAR 14

dawn 6:25 sunrise 7:22 sunset 7:16 dark 8:13
moonset 8:40 a.m. moonrise 9:33 p.m.



feet 5.5 ft.
(1:34)

5.1 ft.
(1:41)



12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
s flood — 3.4 knots ebb — 2.6 knots flood — 3.3 knots ebb — 2.8 knots
- 2.5 knots flood — 2.3 knots ebb — 2.2 knots flood — 2.4 knots ebb —

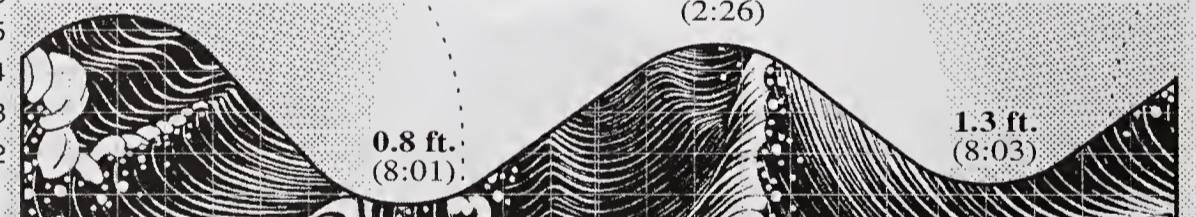
WED MAR 15

dawn 6:24 sunrise 7:20 sunset 7:17 dark 8:14
moonset 9:12 a.m. moonrise 10:30 p.m.



feet 5.4 ft.
(2:03)

4.7 ft.
(2:26)



12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
flood — 3.3 knots ebb — 2.4 knots flood — 2.9 knots ebb — 2.4 knots
- 2.5 knots flood — 2.3 knots ebb — 1.9 knots flood — 2.2 knots ebb —

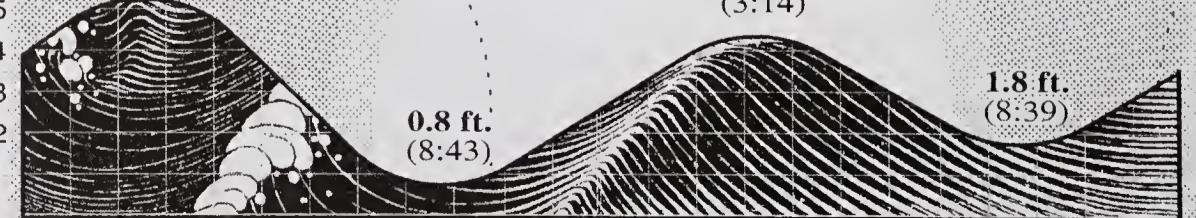
THU MAR 16

dawn 6:22 sunrise 7:19 sunset 7:18 dark 8:15
moonset 9:45 a.m. moonrise 11:26 p.m.



feet 5.3 ft.
(2:33)

4.4 ft.
(3:14)

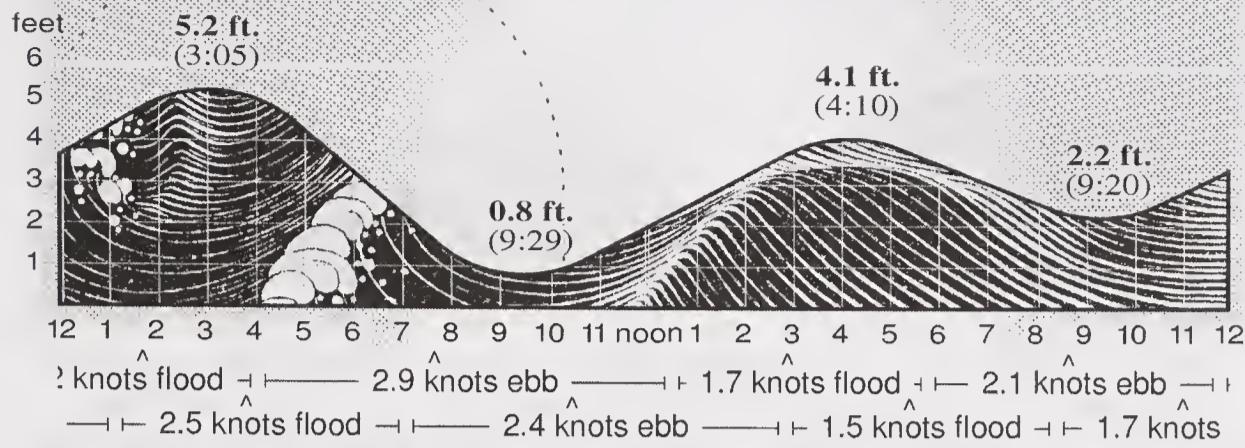


12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
knots flood — 3.1 knots ebb — 2 knots flood — 2.5 knots ebb — 2 knots
- 2.6 knots flood — 2.3 knots ebb — 1.7 knots flood — 2 knots ebb —

FRI MAR 17

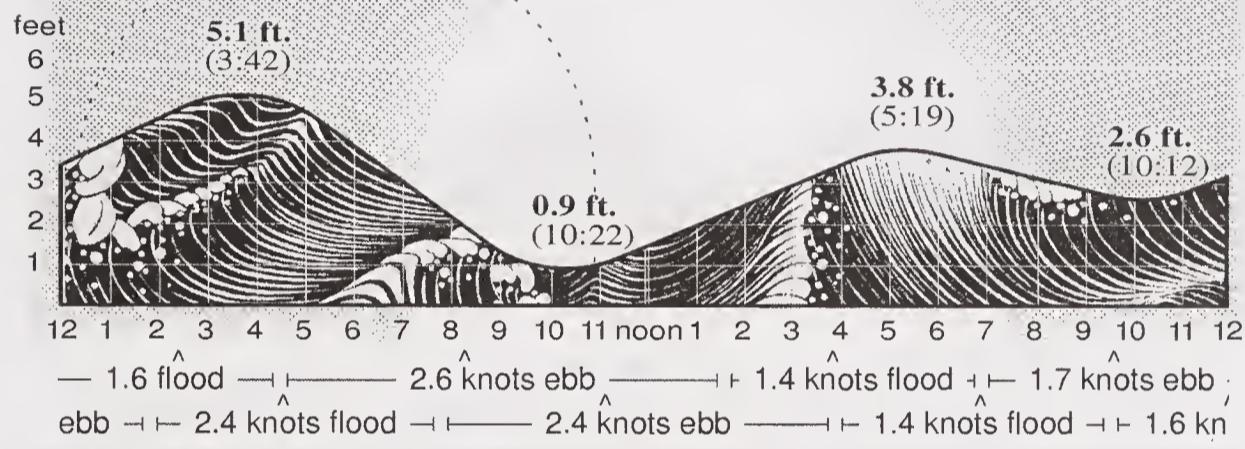
dawn 6:21 sunrise 7:17 sunset 7:19 dark 8:16
moonset 10:19 a.m.

St. Patrick's Day



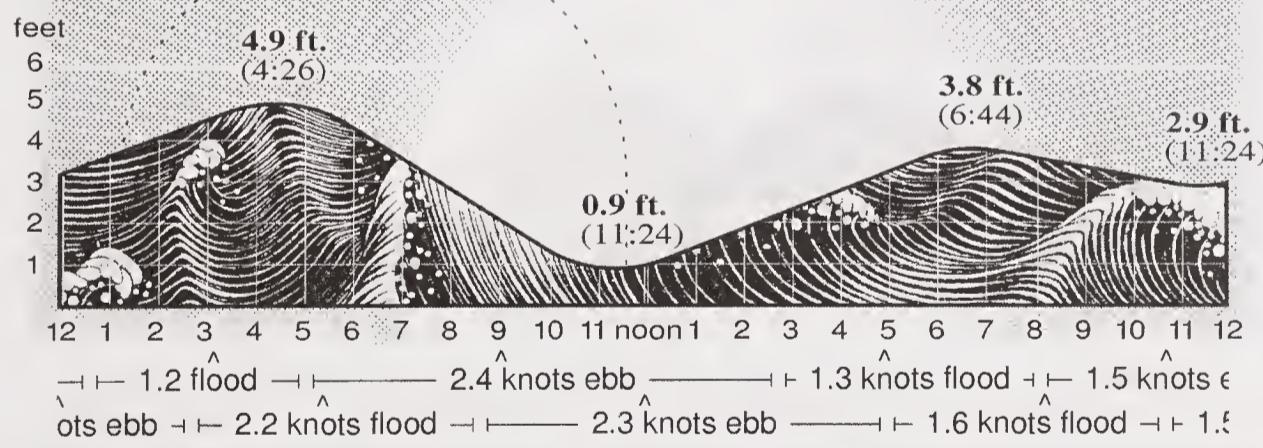
SAT MAR 18

dawn 6:19 sunrise 7:16 sunset 7:20 dark 8:17
moonrise 12:20 a.m. moonset 10:57 a.m.



SUN MAR 19

dawn 6:18 sunrise 7:14 sunset 7:21 dark 8:18
moonrise 1:14 a.m. moonset 11:37 a.m.



(J)

(S)

(M)

MON MAR 20

dawn 6:16 sunrise 7:13 sunset 7:22 dark 8:19
moonrise 2:05 a.m. moonset 12:22 p.m.

Vernal Equinox
3:29 a.m.



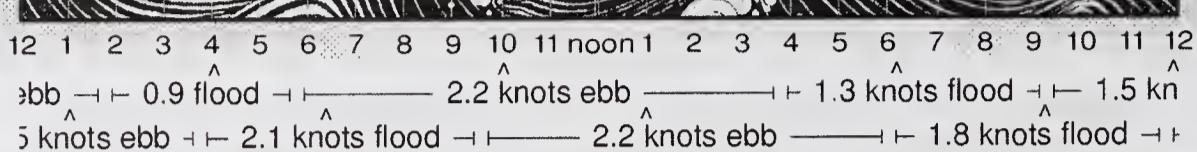
South

feet

4.8 ft.
(5:22)

3.9 ft.
(8:07)

0.8 ft.
(1:23)



TUE MAR 21

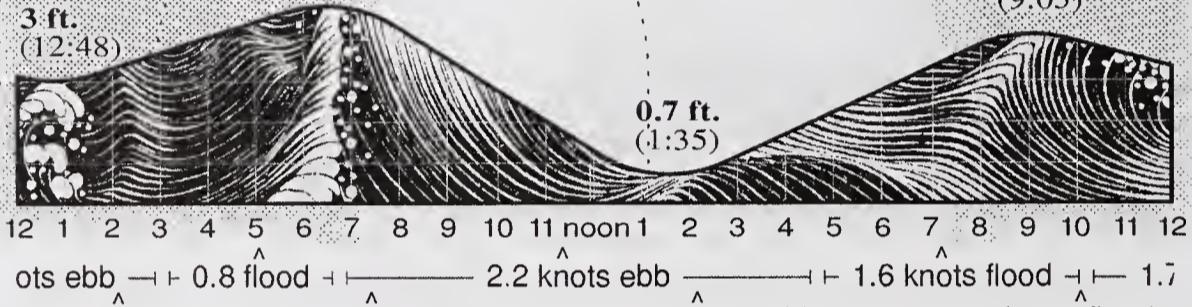
dawn 6:15 sunrise 7:11 sunset 7:23 dark 8:20
moonrise 2:55 a.m. moonset 1:11 p.m.



feet

4.8 ft.
(6:27)

4.1 ft.
(9:05)



WED MAR 22

dawn 6:13 sunrise 7:10 sunset 7:24 dark 8:21
moonrise 3:41 a.m. moonset 2:04 p.m.



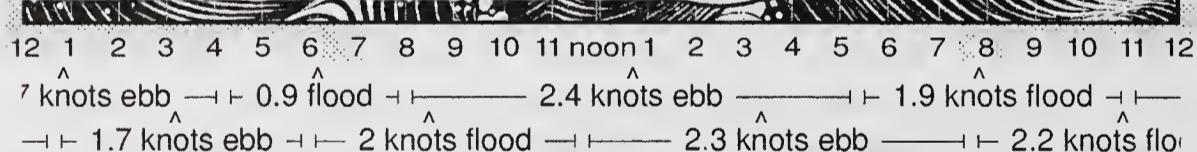
feet

4.9 ft.
(7:32)

4.4 ft.
(9:46)

2.8 ft.
(1:56)

0.4 ft.
(2:29)



THU MAR 23

dawn 6:11 sunrise 7:08 sunset 7:25 dark 8:22
moonrise 4:25 a.m. moonset 3:01 p.m.



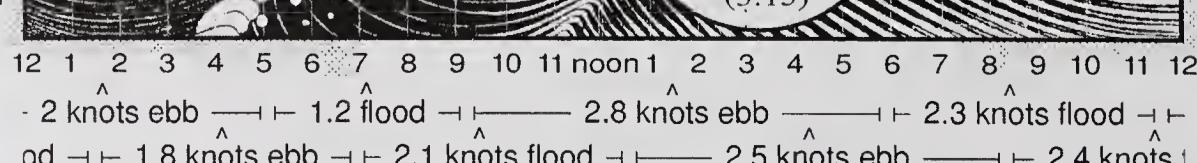
feet

5 ft.
(8:32)

4.6 ft.
(10:20)

2.6 ft.
(2:49)

0.2 ft.
(3:15)



FRI MAR 24

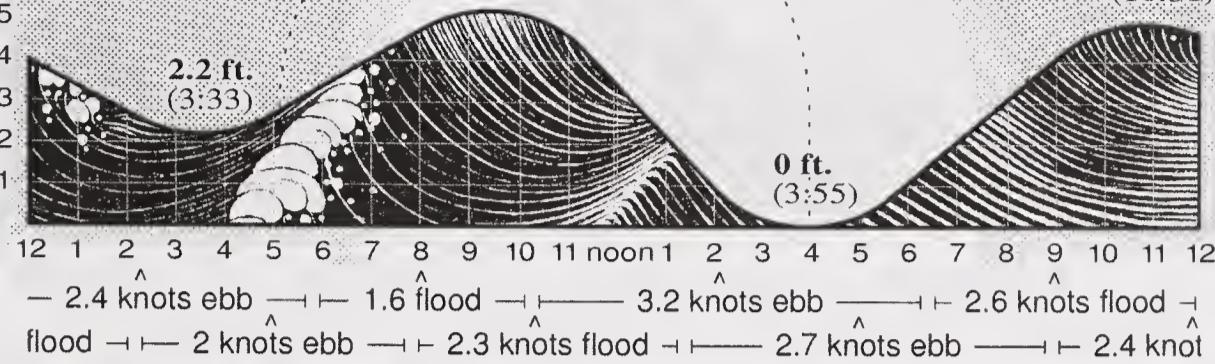
dawn 6:10 sunrise 7:07 sunset 7:26 dark 8:23
moonrise 5:07 a.m. moonset 4:02 p.m.



feet

5.2 ft.
(9:26)

4.9 ft.
(10:51)



SAT MAR 25

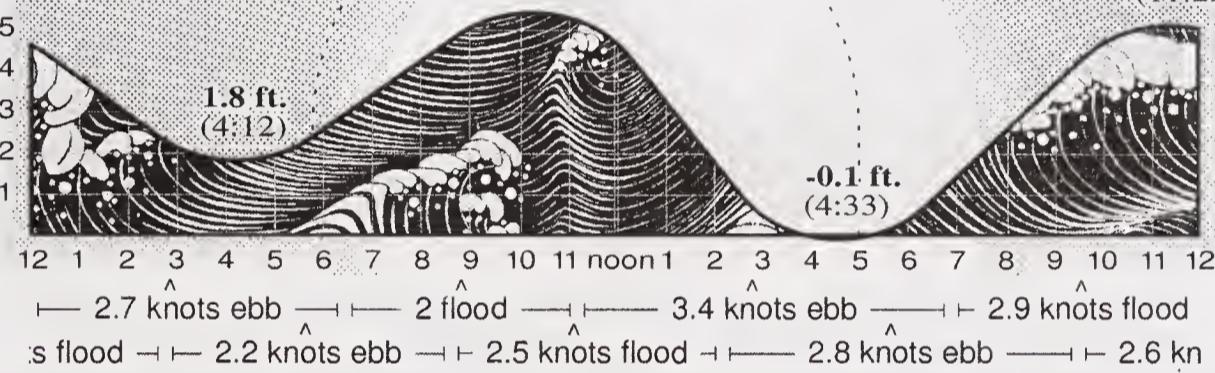
dawn 6:08 sunrise 7:05 sunset 7:27 dark 8:24
moonrise 5:46 a.m. moonset 5:05 p.m.



feet

5.4 ft.
(10:16)

5.1 ft.
(11:22)



SUN MAR 26

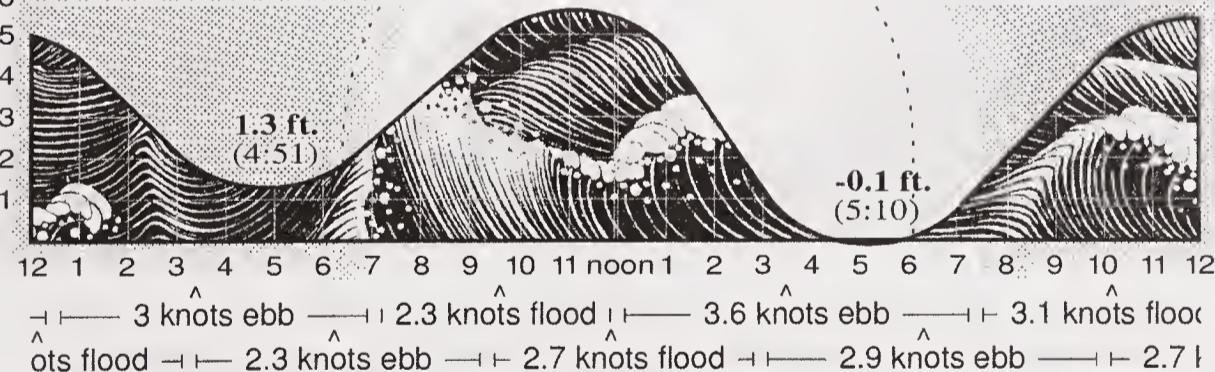
dawn 6:07 sunrise 7:04 sunset 7:28 dark 8:25
moonrise 6:23 a.m. moonset 6:11 p.m.



feet

5.6 ft.
(11:05)

5.4 ft.
(11:53)



J

S

m

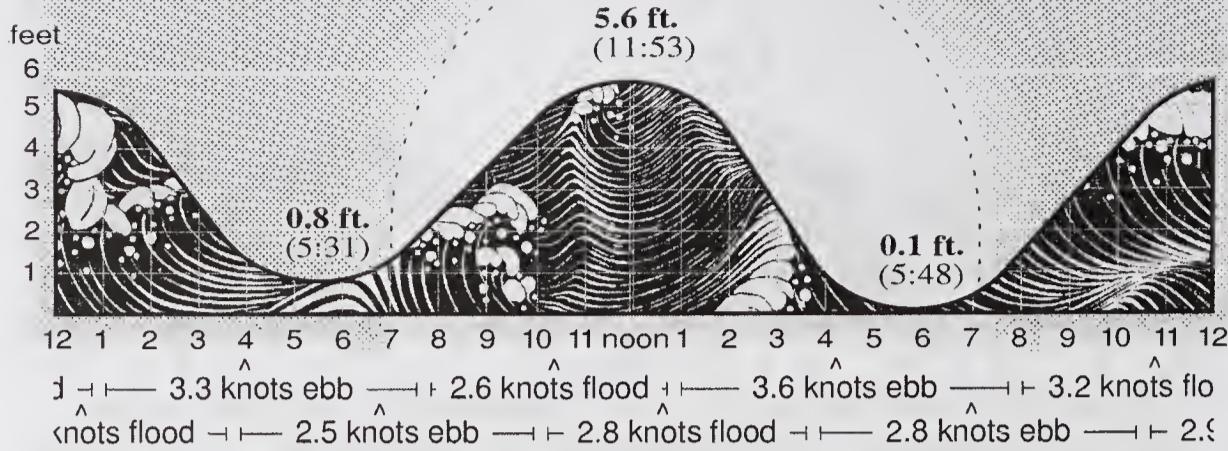
M

Vernal Equinox On March 20th, the Sun will shine directly over the equator causing nearly equal amount of day and night throughout the world. This marks the first day of Spring in the northern hemisphere.

MON MAR 27

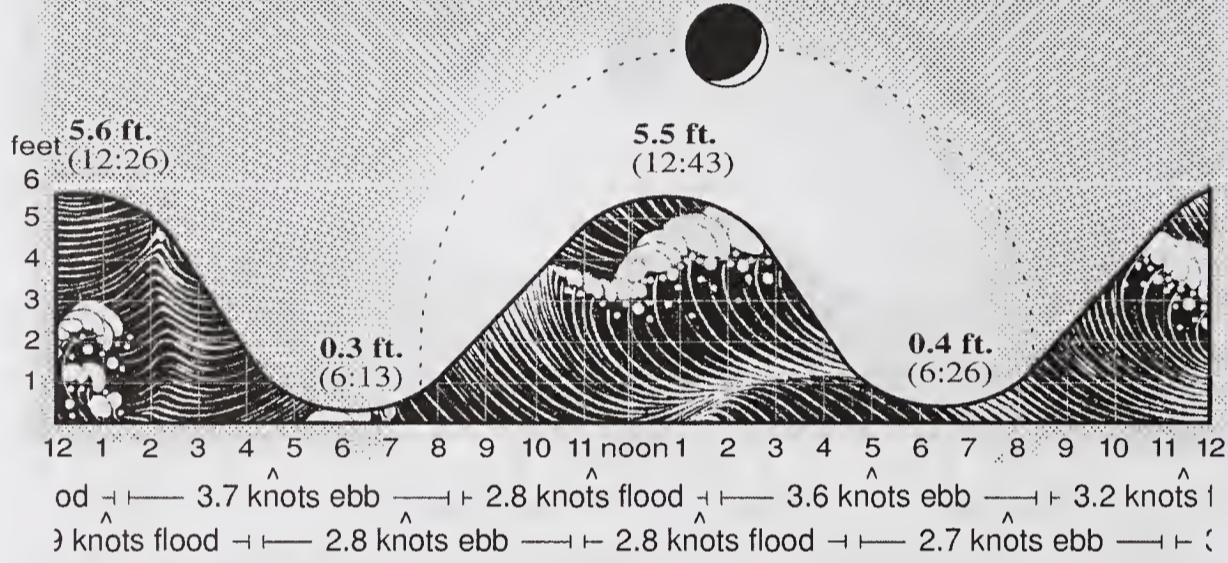
dawn 6:05 sunrise 7:02 sunset 7:29 dark 8:26
moonrise 7:00 a.m. moonset 7:18 p.m.

New Moon 7:57 p.m.



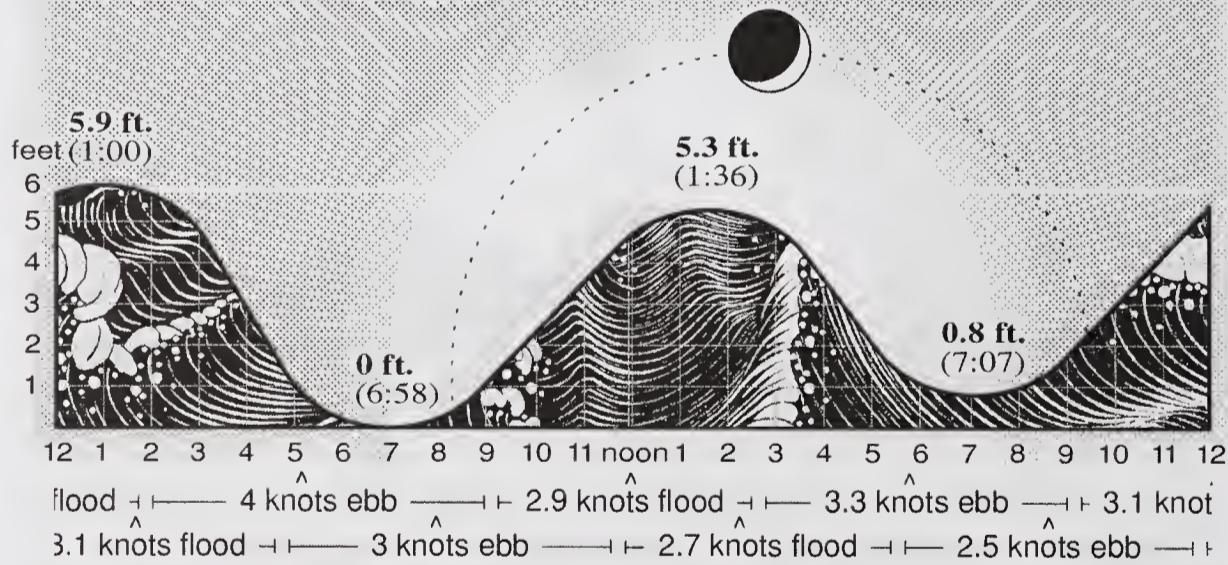
TUE MAR 28

dawn 6:03 sunrise 7:01 sunset 7:29 dark 8:27
moonrise 7:37 a.m. moonset 8:27 p.m.



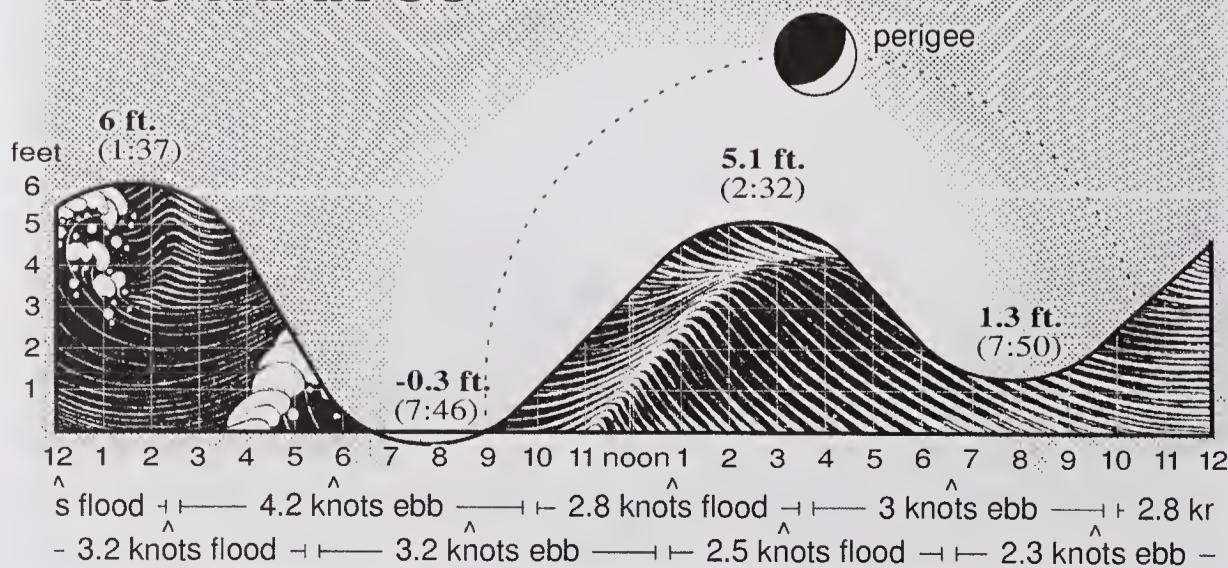
WED MAR 29

dawn 6:02 sunrise 6:59 sunset 7:30 dark 8:28
moonrise 8:16 a.m. moonset 9:37 p.m.



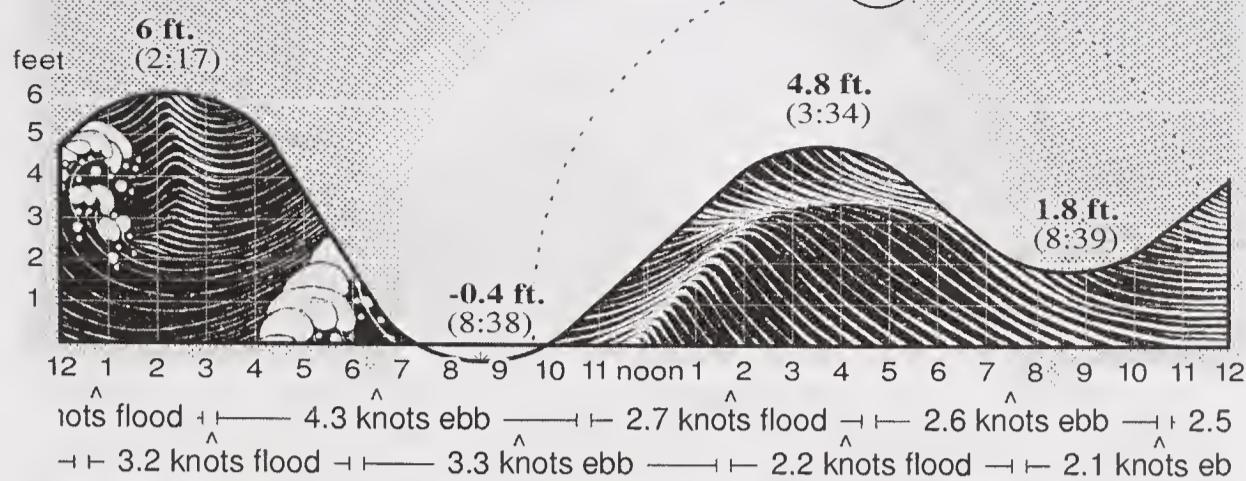
THU MAR 30

dawn 6:00 sunrise 6:58 sunset 7:31 dark 8:29
moonrise 8:57 a.m. moonset 10:46 p.m.



FRI MAR 31

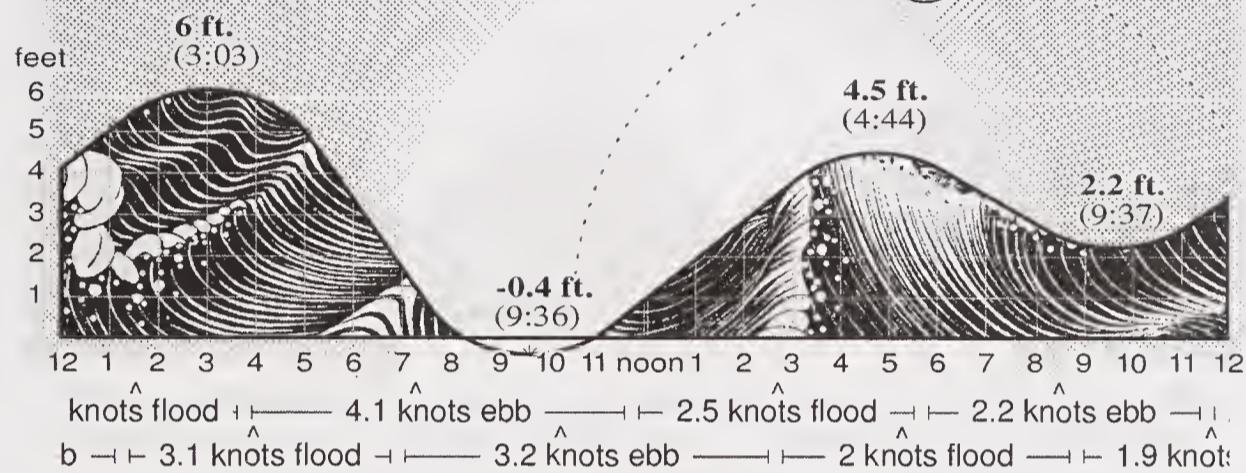
dawn 5:59 sunrise 6:56 sunset 7:32 dark 8:30
moonrise 9:41 a.m. moonset 11:55 p.m.



SAT APR 1

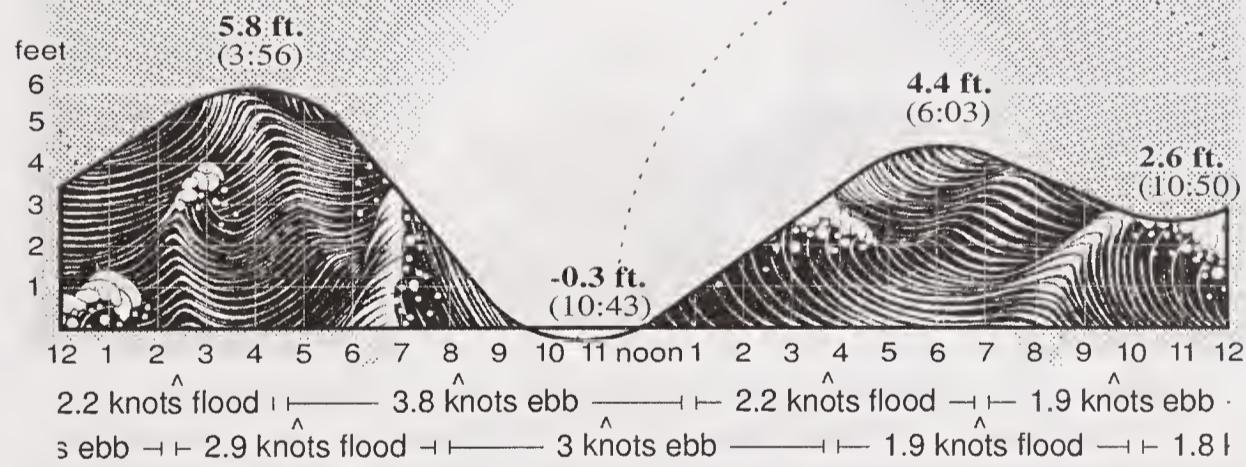
dawn 5:57 sunrise 6:55 sunset 7:33 dark 8:31
moonrise 10:30 a.m.

April Fool's Day



SUN APR 2

dawn 5:55 sunrise 6:53 sunset 7:34 dark 8:32
moonset 12:59 a.m. moonrise 11:24 a.m.



J

S

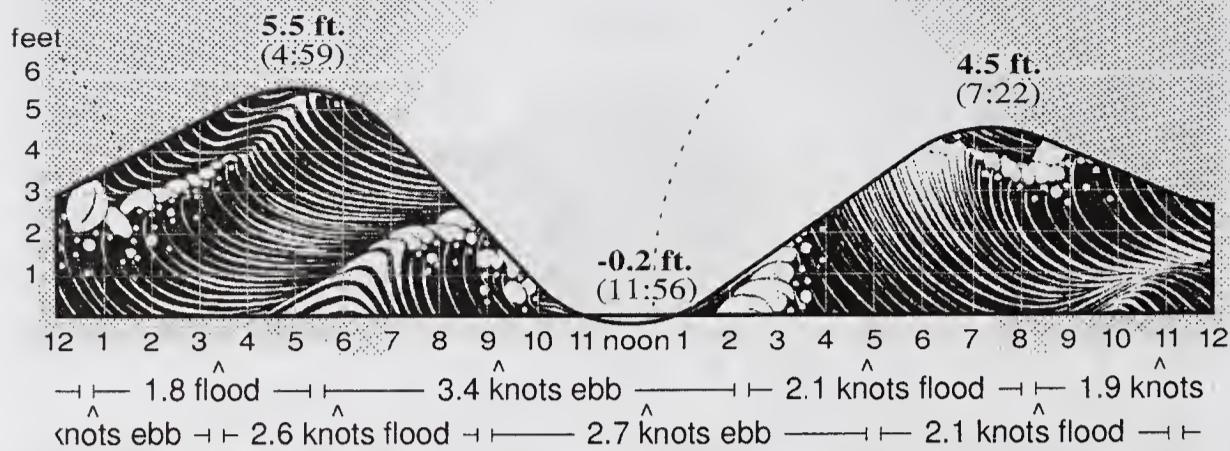
V

W

M

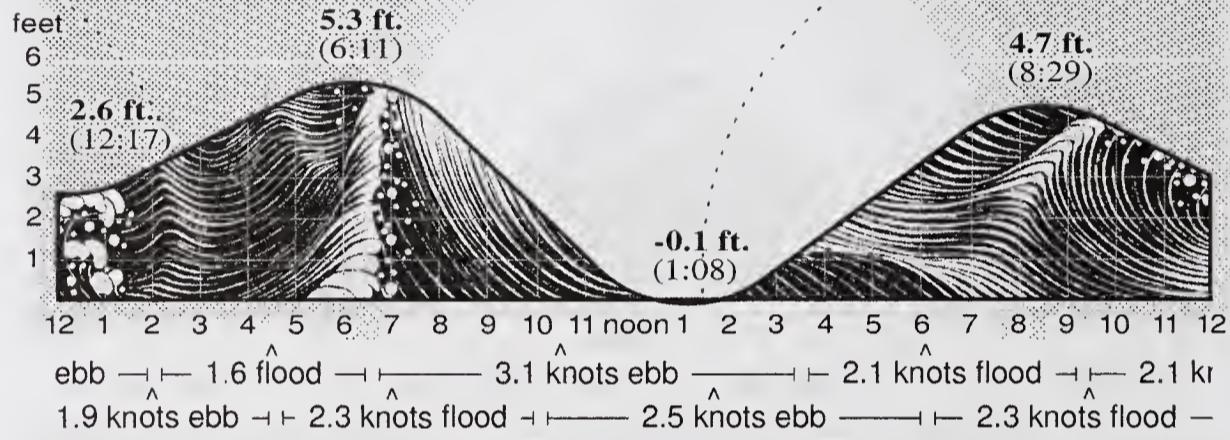
MON APR 3

dawn 5:54 sunrise 6:52 sunset 7:35 dark 8:33
moonset 1:59 a.m. moonrise 12:22 p.m.



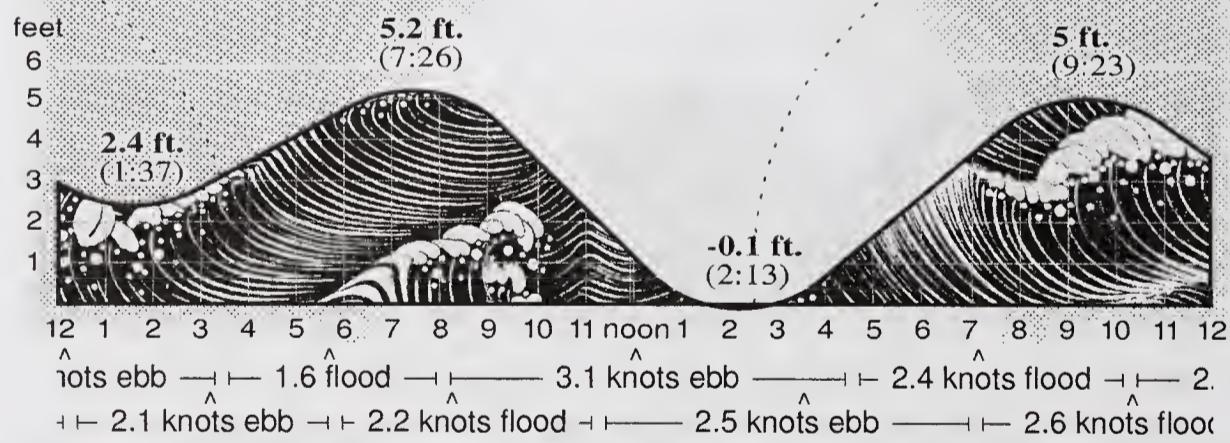
TUE APR 4

dawn 5:52 sunrise 6:50 sunset 7:36 dark 8:34
moonset 2:53 a.m. moonrise 1:22 p.m.



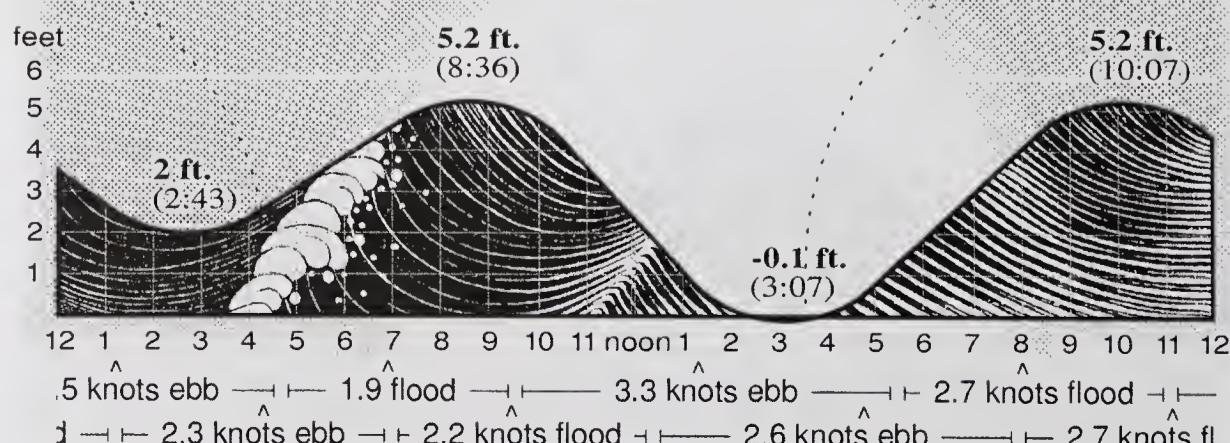
WED APR 5

dawn 5:51 sunrise 6:49 sunset 7:37 dark 8:35
moonset 3:41 a.m. moonrise 2:24 p.m.



THU APR 6

dawn 5:49 sunrise 6:47 sunset 7:38 dark 8:36
moonset 4:23 a.m. moonrise 3:26 p.m.



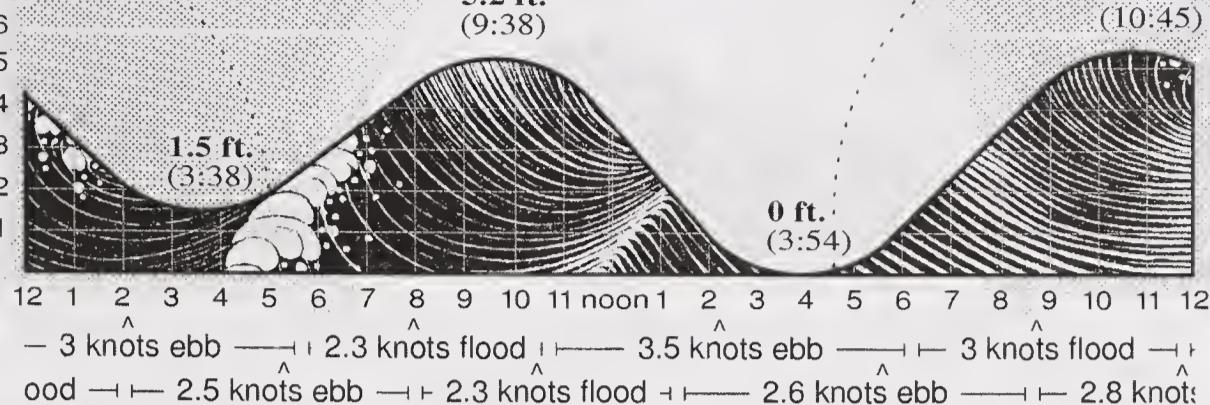
FRI APR 7

dawn 5:47 sunrise 6:46 sunset 7:39 dark 8:37
moonset 5:01 a.m. moonrise 4:27 p.m.

Jupiter at Opposition



feet

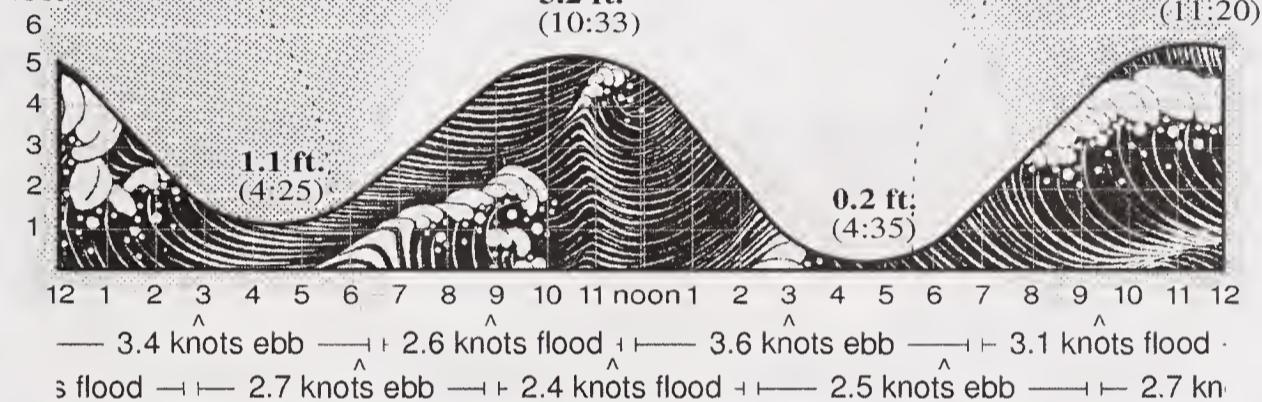


SAT APR 8

dawn 5:46 sunrise 6:44 sunset 7:40 dark 8:38
moonset 5:36 a.m. moonrise 5:27 p.m.



feet



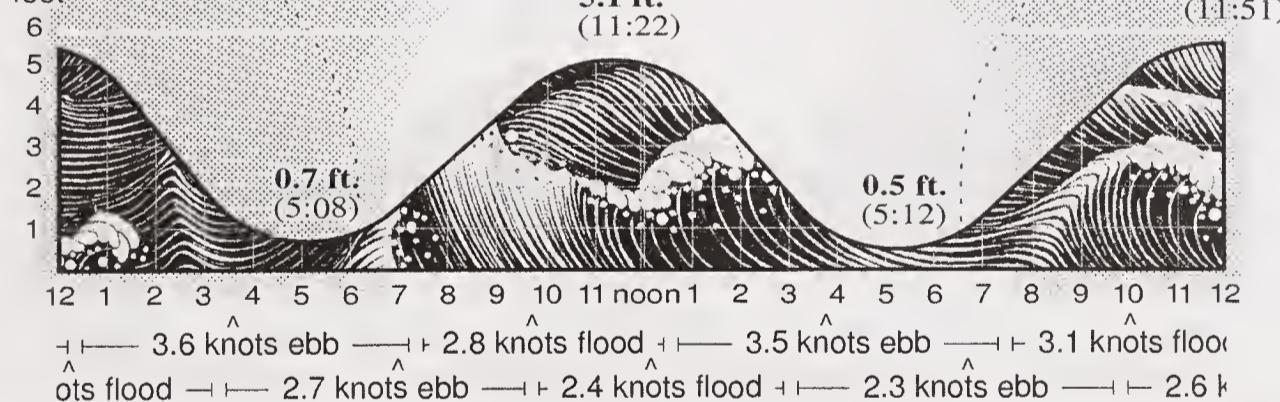
SUN APR 9

dawn 5:44 sunrise 6:43 sunset 7:40 dark 8:39
moonset 6:09 a.m. moonrise 6:26 p.m.

equator



feet



J

S

V

M

Jupiter at Opposition On April 7, Jupiter will be at its closest approach to Earth with the Sun fully illuminating its face. Jupiter will be visible all night and with a clear night it should be possible to see four of Jupiter's largest moons that will appear as bright dots of light on either side of the planet with a good pair of binoculars or small telescope.

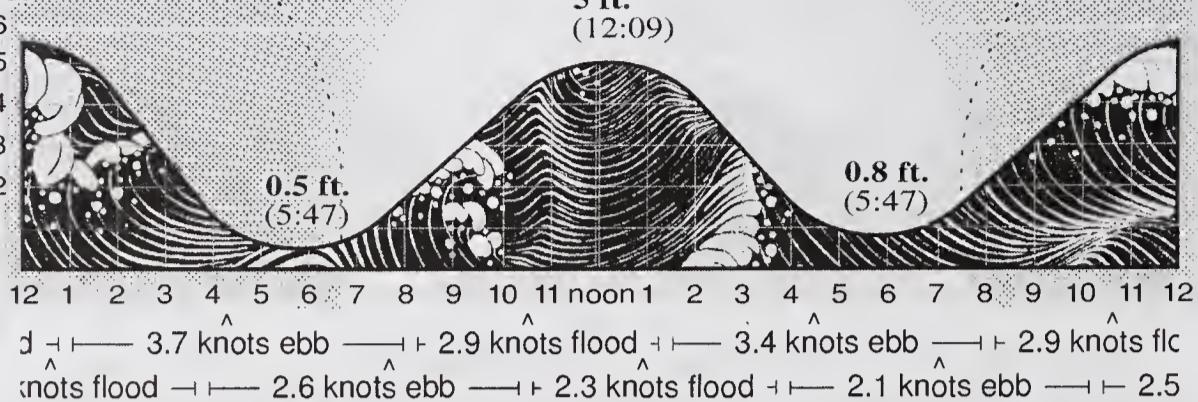
MON APR 10

dawn 5:43 sunrise 6:41 sunset 7:41 dark 8:40
moonset 6:40 a.m. moonrise 7:24 p.m.



Full Moon 11:08 p.m.

feet

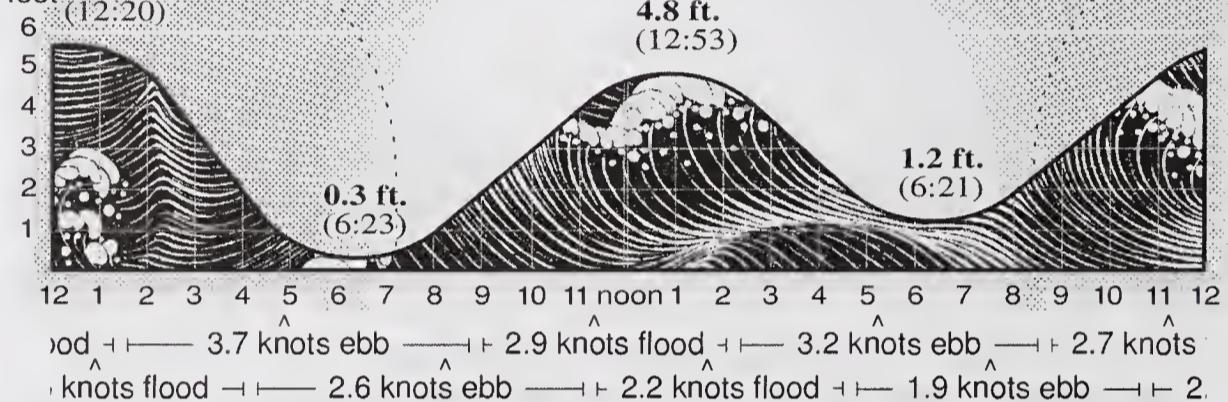


TUE APR 11

dawn 5:41 sunrise 6:40 sunset 7:42 dark 8:41
moonset 7:12 a.m. moonrise 8:21 p.m.

Passover

feet

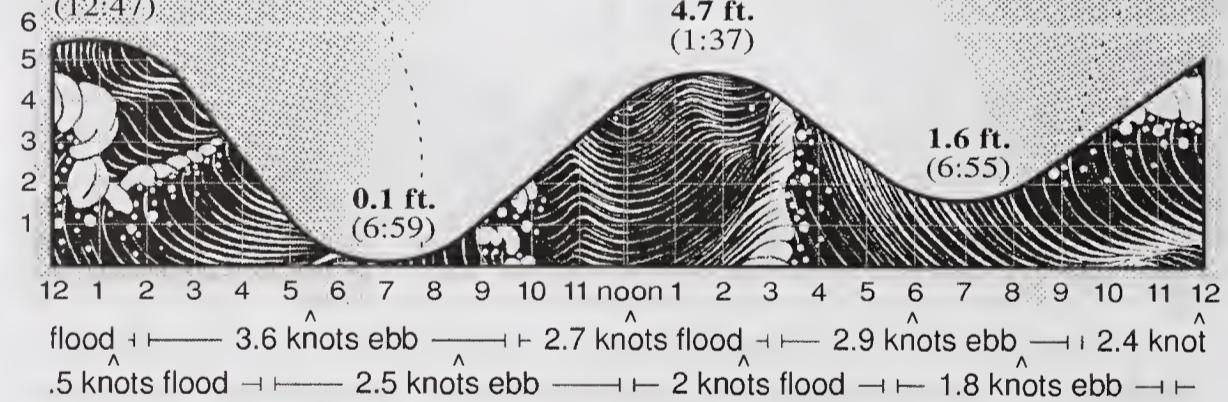


WED APR 12

dawn 5:39 sunrise 6:38 sunset 7:43 dark 8:42
moonset 7:44 a.m. moonrise 9:17 p.m.



feet

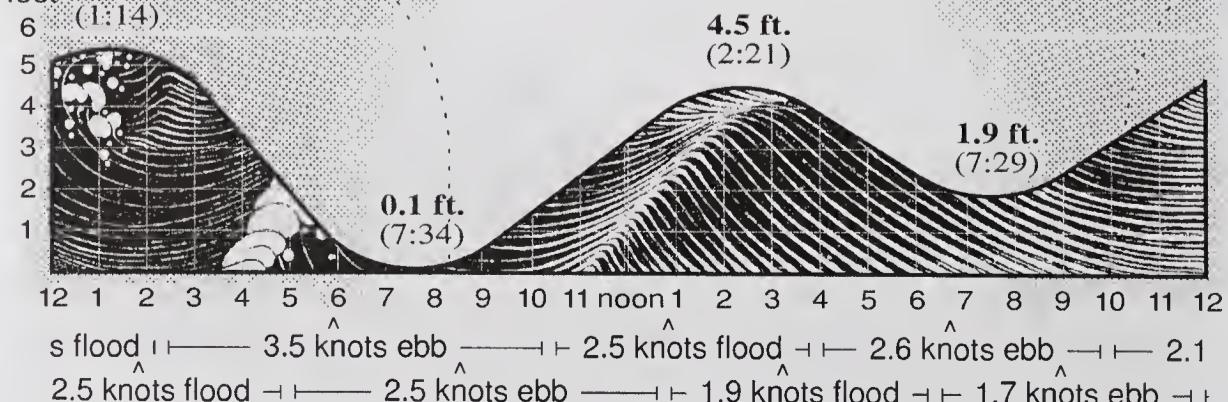


THU APR 13

dawn 5:38 sunrise 6:37 sunset 7:44 dark 8:43
moonset 8:18 a.m. moonrise 10:12 p.m.



feet



FRI APR 14

dawn 5:36 sunrise 6:36 sunset 7:45 dark 8:45
moonset 8:54 a.m. moonrise 11:06 p.m.

Good Friday



feet 5.4 ft.
(1:43)



4.3 ft.
(3:08)

2.3 ft.
(8:05)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
flood —^— 3.3 knots ebb —^— 2.2 knots flood —^— 2.2 knots ebb —^— 1
— 2.6 knots flood —^— 2.6 knots ebb —^— 1.7 knots flood —^— 1.6 knots ebb

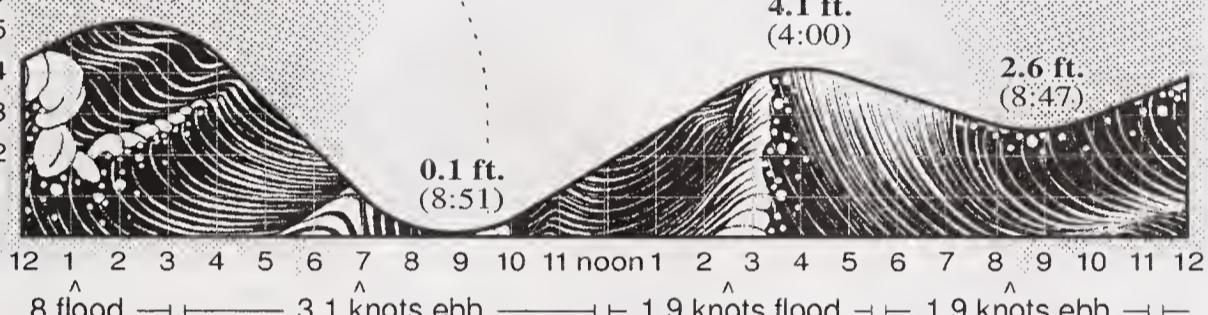
SAT APR 15

dawn 5:35 sunrise 6:34 sunset 7:46 dark 8:46
moonset 9:33 a.m. moonrise 11:58 p.m.

apogee



feet 5.2 ft.
(2:14)



4.1 ft.
(4:00)

2.6 ft.
(8:47)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
.8 flood —^— 3.1 knots ebb —^— 1.9 knots flood —^— 1.9 knots ebb —^—
— 2.5 knots flood —^— 2.7 knots ebb —^— 1.7 knots flood —^— 1.5 knots e

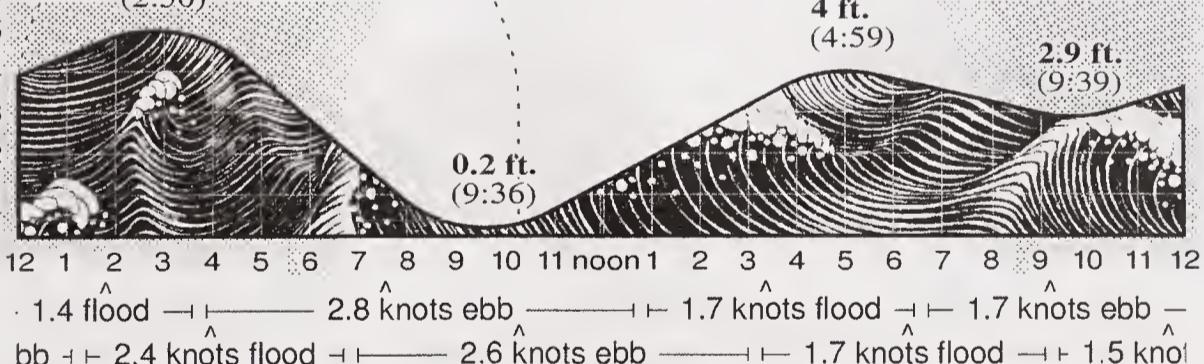
SUN APR 16

dawn 5:33 sunrise 6:33 sunset 7:47 dark 8:47
moonset 10:16 a.m.

Easter



feet 5 ft.
(2:50)



4 ft.
(4:59)

2.9 ft.
(9:39)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
.1.4 flood —^— 2.8 knots ebb —^— 1.7 knots flood —^— 1.7 knots ebb —
bb —^— 2.4 knots flood —^— 2.6 knots ebb —^— 1.7 knots flood —^— 1.5 knots

J

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V

M

MON APR 17

dawn 5:32 sunrise 6:31 sunset 7:48 dark 8:48
moonrise 12:48 a.m. moonset 11:03 a.m.



feet

4.8 ft.
(3:34)

4 ft.
(6:07)

3 ft.
(10:51)

0.4 ft.
(10:29)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
↑ 1.1 flood → 2.6 knots ebb → 1.5 knots flood → 1.5 knots eb
ts ebb → 2.2 knots flood → 2.5 knots ebb → 1.7 knots flood → 1.6

TUE APR 18

dawn 5:30 sunrise 6:30 sunset 7:49 dark 8:49
moonrise 1:36 a.m. moonset 11:53 a.m.



feet

4.6 ft.
(4:28)

4.1 ft.
(7:14)

0.4 ft.
(11:29)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
b → 0.8 flood → 2.4 knots ebb → 1.5 knots flood → 1.5 knot
knots ebb → 2 knots flood → 2.4 knots ebb → 1.9 knots flood →

WED APR 19

dawn 5:29 sunrise 6:29 sunset 7:50 dark 8:50
moonrise 2:20 a.m. moonset 12:48 p.m.



feet

4.5 ft.
(5:34)

4.3 ft.
(8:08)

0.4 ft.
(12:32)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
s ebb → 0.7 flood → 2.3 knots ebb → 1.7 knots flood → 1.8 k
1.7 knots ebb → 1.8 knots flood → 2.4 knots ebb → 2.1 knots flood →

THU APR 20

dawn 5:27 sunrise 6:27 sunset 7:51 dark 8:51
moonrise 3:01 a.m. moonset 1:46 p.m.



feet

4.4 ft.
(6:47)

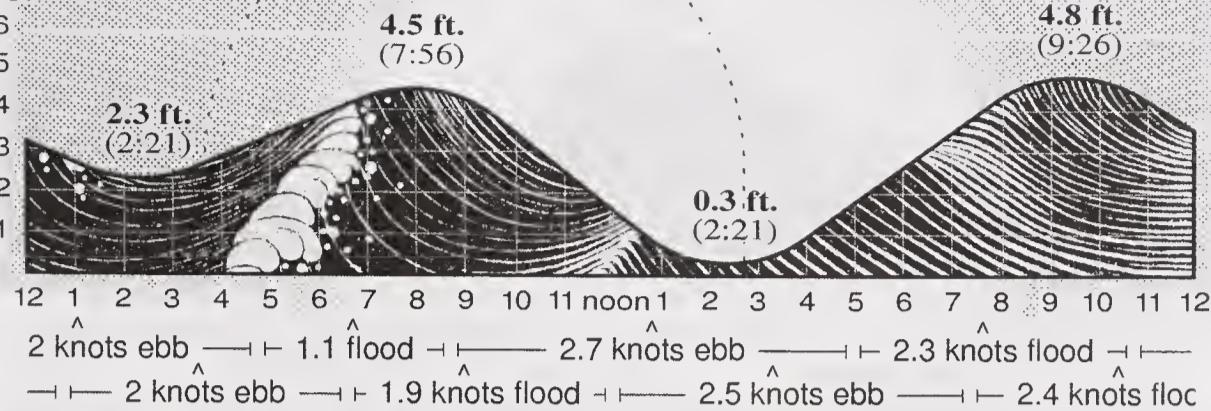
4.5 ft.
(8:50)

0.4 ft.
(1:30)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
knots ebb → 0.8 flood → 2.4 knots ebb → 2 knots flood → 2.
1.8 knots ebb → 1.8 knots flood → 2.4 knots ebb → 2.3 knots flood →

FRI APR 21dawn 5:26 sunrise 6:26 sunset 7:51 dark 8:52
moonrise 3:40 a.m. moonset 2:46 p.m.

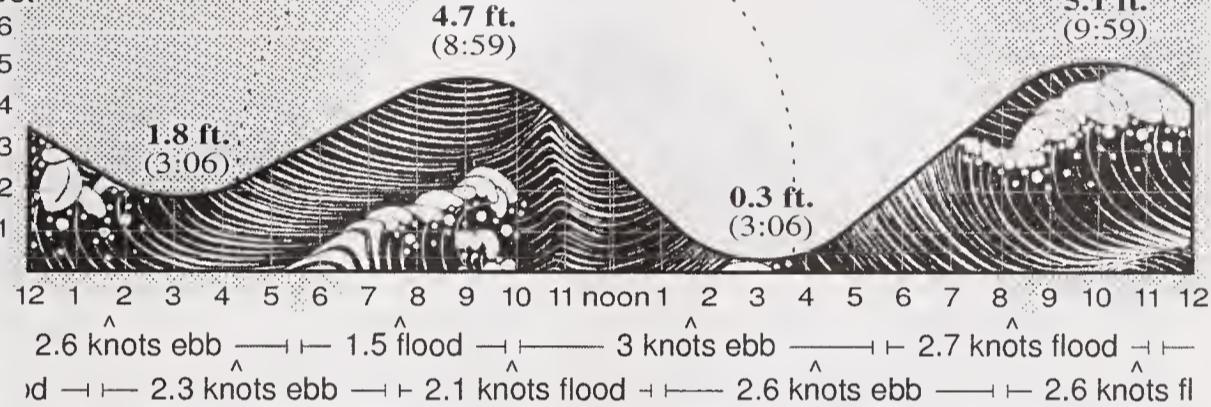
feet

**SAT APR 22**dawn 5:24 sunrise 6:25 sunset 7:52 dark 8:53
moonrise 4:18 a.m. moonset 3:50 p.m.

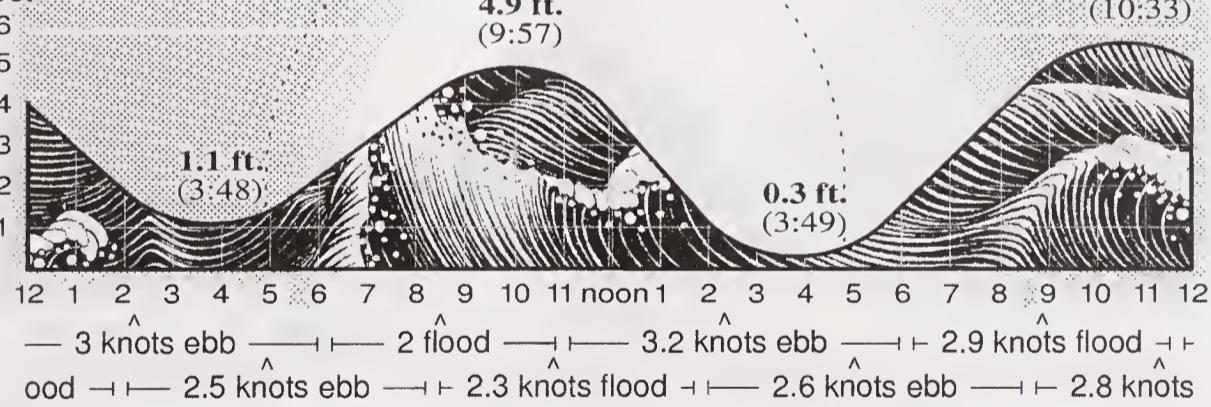
Lyrids Meteor Peak



feet

**SUN APR 23**dawn 5:23 sunrise 6:23 sunset 7:53 dark 8:54
moonrise 4:54 a.m. moonset 4:56 p.m.

feet



S

V

M

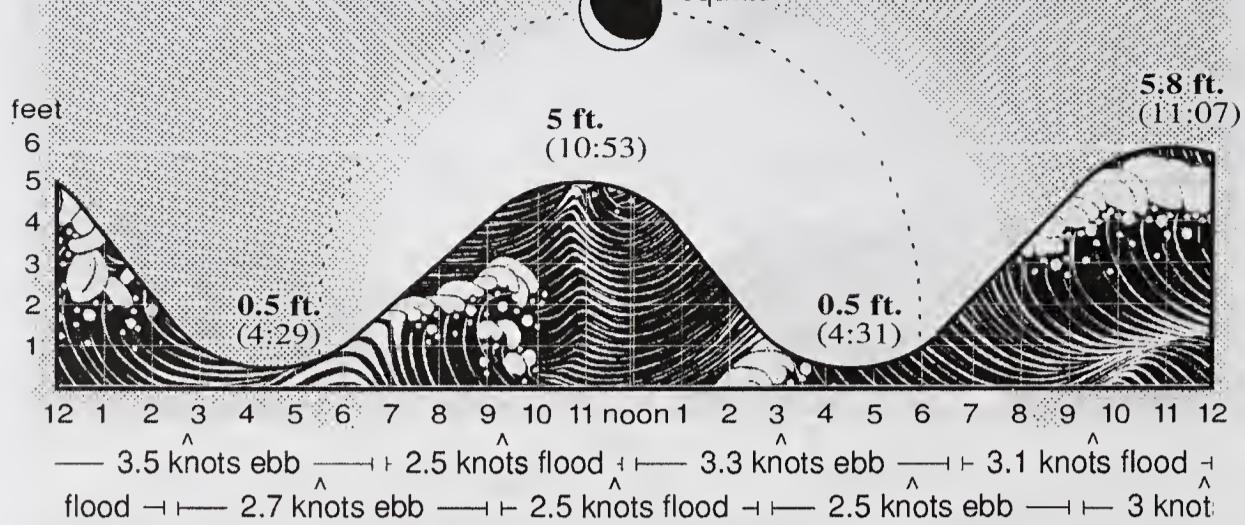
J

Lyrids Meteor Shower The Lyrids are active this year between April 16th through the 25th with the shower's peak falling on Saturday evening and morning of the 22nd and 23rd. The Lyrids appear to radiate from the constellation Lyra - the Harp. The Lyrids are an average meteor shower producing up to 20 meteors per hour. The last quarter moon will be setting early on the evening of the 22nd increasing the possibility of viewing the Lyrids' bright persistent dusty meteor trails. The Lyrids' radiant point - the constellation Lyrid - appears high overhead as a lopsided square. The constellation Lyrid includes one of the brightest stars in the night sky - Vega. Vega is located just beside one of the harp's corners.

MON APR 24

dawn 5:21 sunrise 6:22 sunset 7:54 dark 8:56
moonrise 5:30 a.m. moonset 6:04 p.m.

equator



TUE APR 25

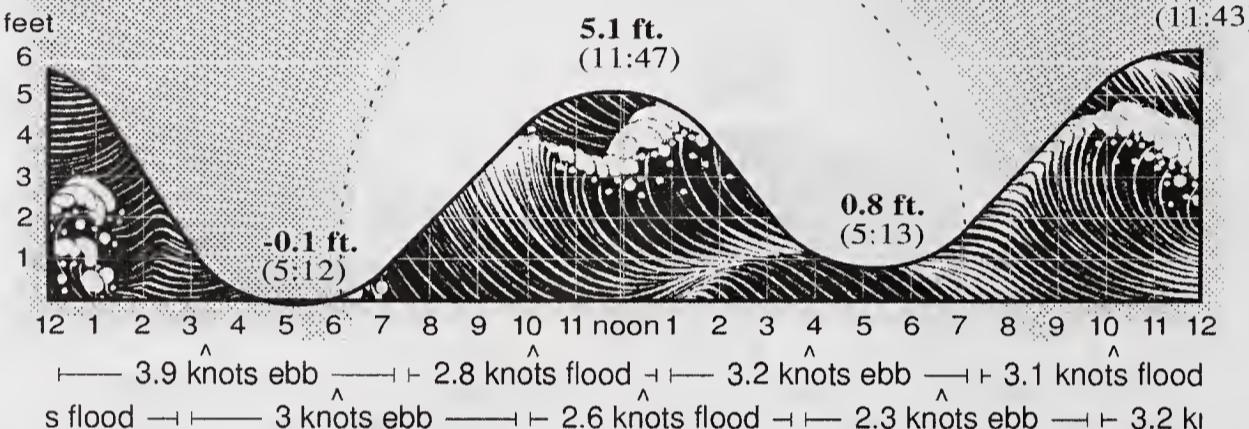
dawn 5:20 sunrise 6:21 sunset 7:55 dark 8:57
moonrise 6:08 a.m. moonset 7:14 p.m.



6.1 ft.
(11:43)

5.1 ft.
(11:47)

0.8 ft.
(5:13)



WED APR 26

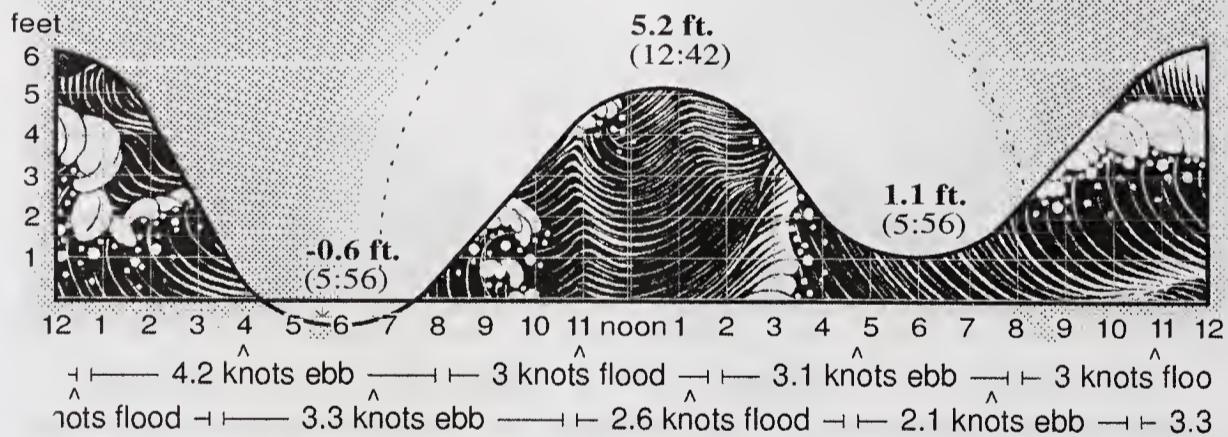
dawn 5:18 sunrise 6:20 sunset 7:56 dark 8:58
moonrise 6:48 a.m. moonset 8:25 p.m.

New Moon 5:16 a.m.



5.2 ft.
(12:42)

1.1 ft.
(5:56)



THU APR 27

dawn 5:17 sunrise 6:18 sunset 7:57 dark 8:59
moonrise 7:32 a.m. moonset 9:37 p.m.

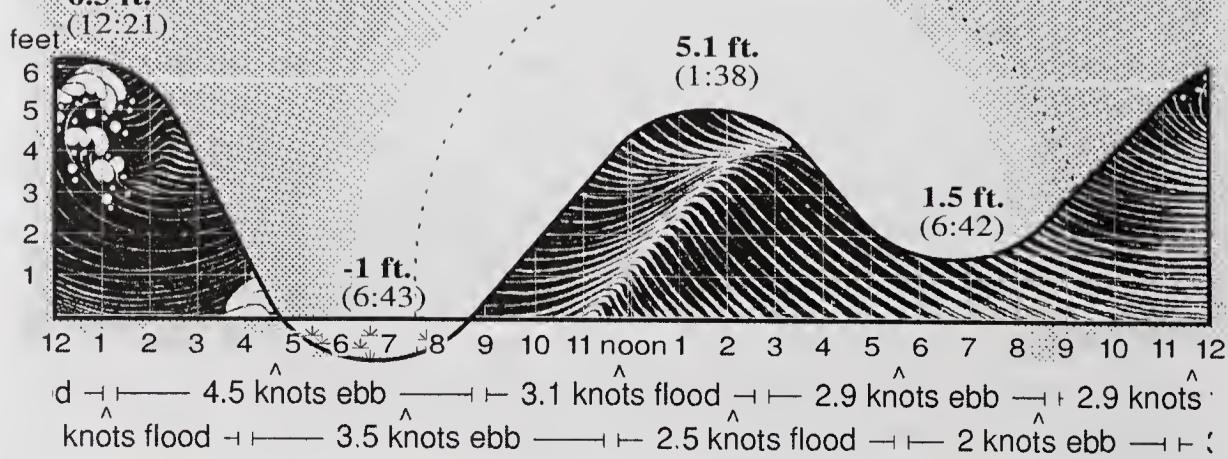
perigee



1.5 ft.
(6:42)

5.1 ft.
(1:38)

-1 ft.
(6:43)

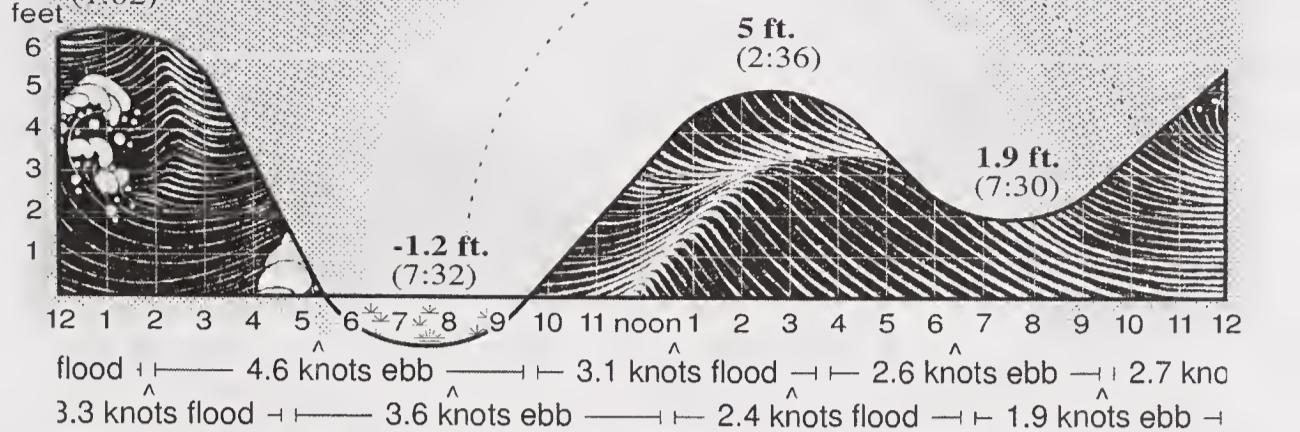


FRI APR 28

dawn 5:15 sunrise 6:17 sunset 7:58 dark 9:00
moonrise 8:20 a.m. moonset 10:46 p.m.



6.4 ft.
(1:02)



5 ft.
(2:36)

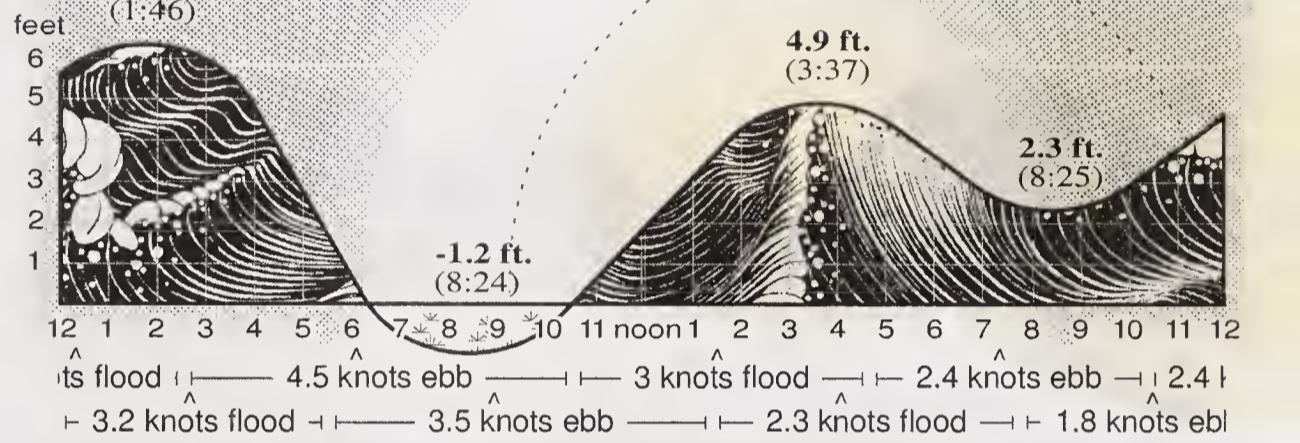
1.9 ft.
(7:30)

SAT APR 29

dawn 5:14 sunrise 6:16 sunset 7:59 dark 9:01
moonrise 9:14 a.m. moonset 1:51 p.m.



6.3 ft.
(1:46)



4.9 ft.
(3:37)

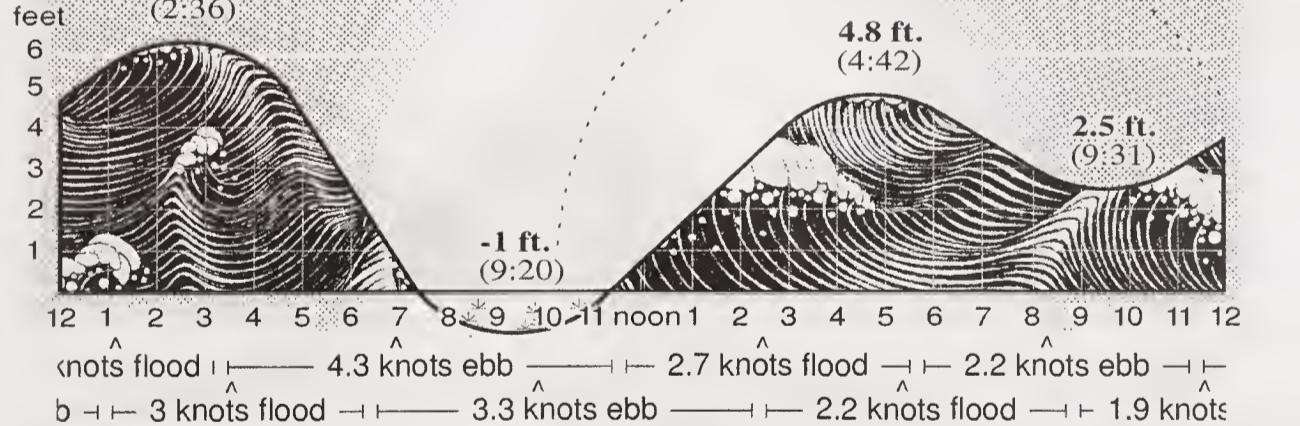
2.3 ft.
(8:25)

SUN APR 30

dawn 5:13 sunrise 6:15 sunset 8:00 dark 9:02
moonrise 10:12 a.m.



6.1 ft.
(2:36)



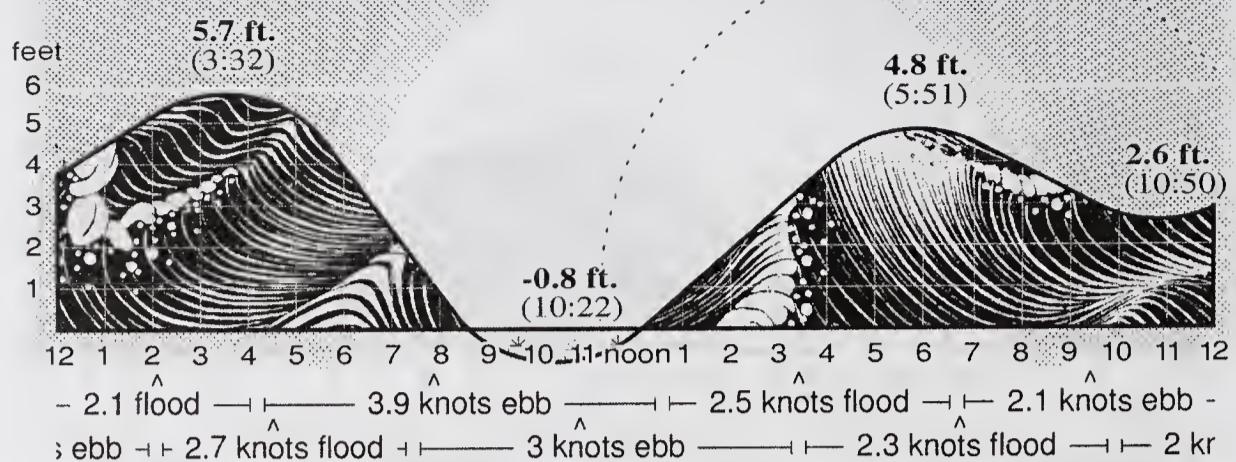
4.8 ft.
(4:42)

2.5 ft.
(9:31)



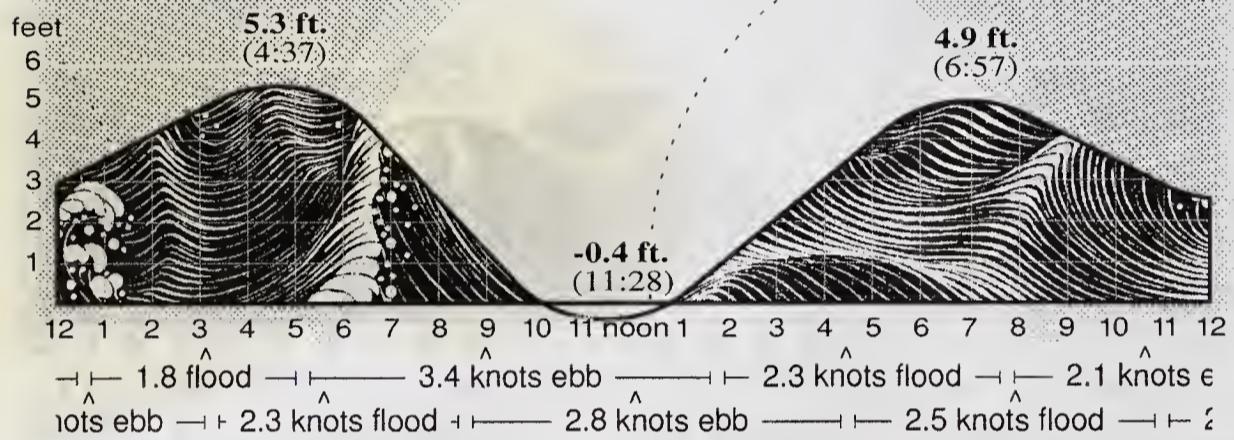
MON MAY 1

dawn 5:11 sunrise 6:14 sunset 8:01 dark 9:03
moonset 12:49 a.m. moonrise 1:14 a.m.



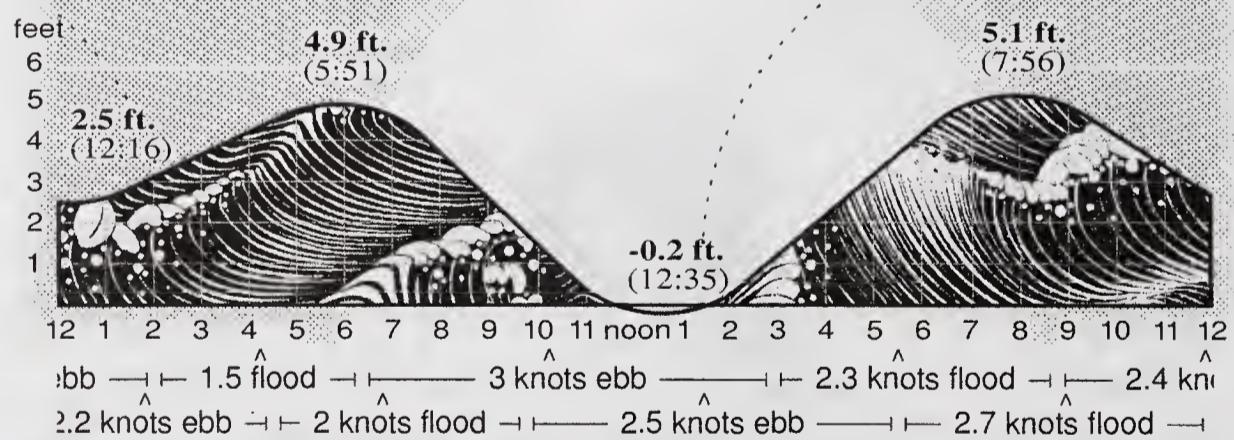
TUE MAY 2

dawn 5:10 sunrise 6:13 sunset 8:02 dark 9:05
moonset 1:40 a.m. moonrise 12:16 p.m.



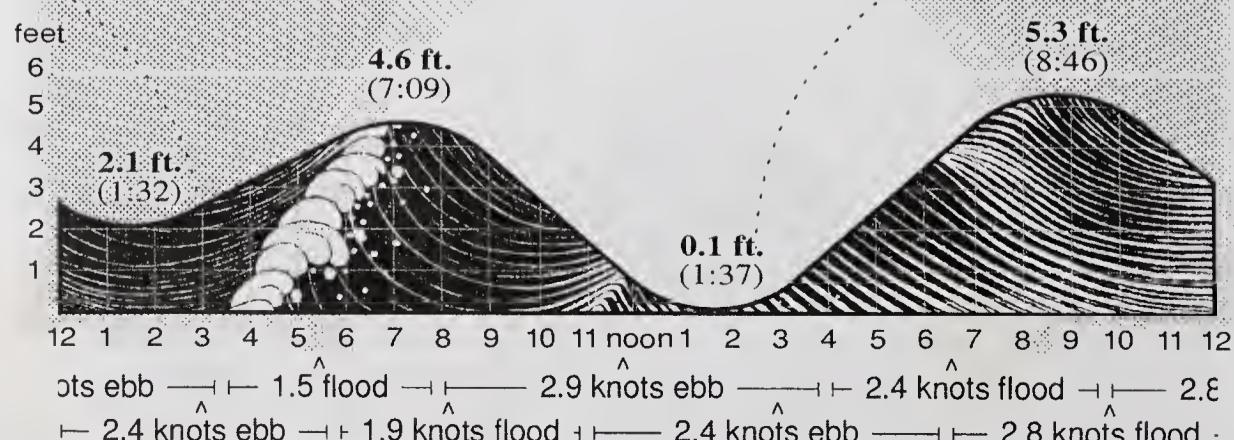
WED MAY 3

dawn 5:09 sunrise 6:11 sunset 8:03 dark 9:06
moonset 2:24 a.m. moonrise 1:19 p.m.



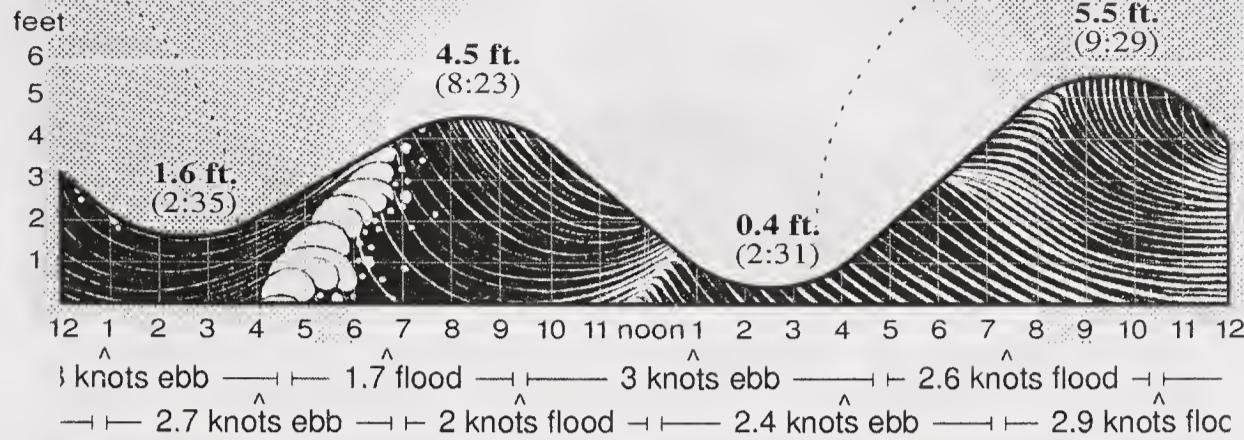
THU MAY 4

dawn 5:07 sunrise 6:10 sunset 8:03 dark 9:07
moonset 3:04 a.m. moonrise 2:21 p.m.



FRI MAY 5

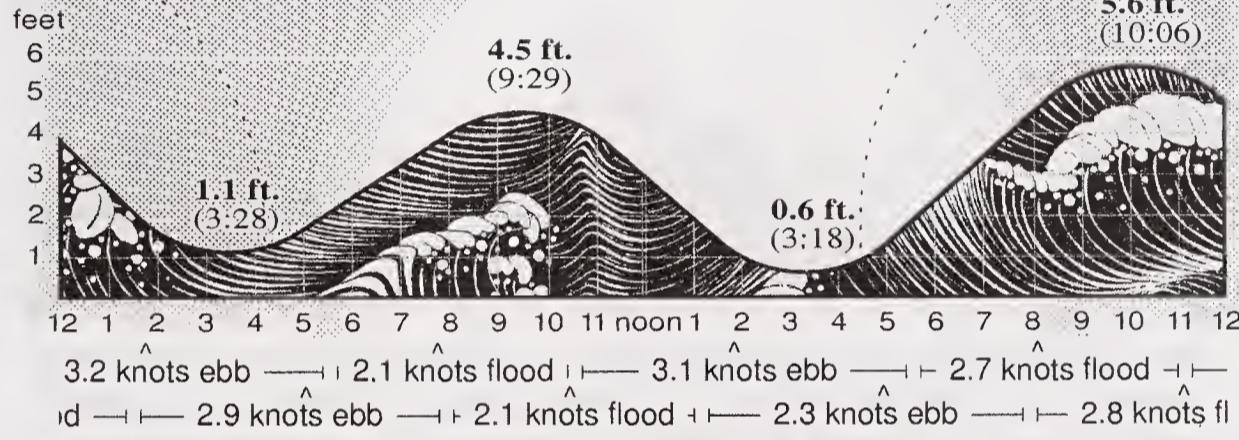
dawn 5:06 sunrise 6:09 sunset 8:04 dark 9:08
moonset 3:39 a.m. moonrise 3:21 p.m.



SAT MAY 6

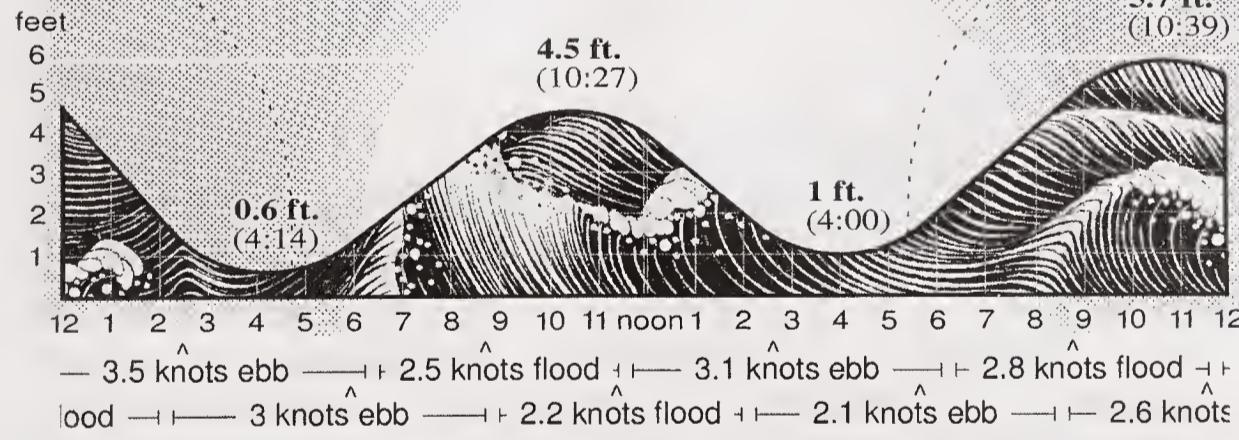
Eta Aquarids Meteor Peak

7 dawn 5:05 sunrise 6:08 sunset 8:05 dark 9:09
moonset 4:12 a.m. moonrise 4:20 p.m.



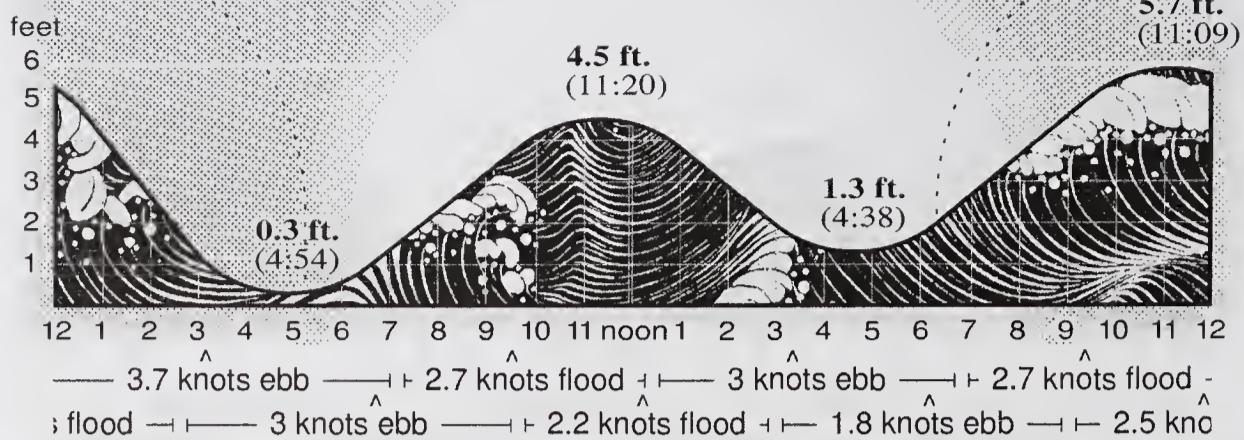
SUN MAY 7

dawn 5:03 sunrise 6:07 sunset 8:06 dark 9:10
moonset 4:43 a.m. moonrise 5:17 p.m.

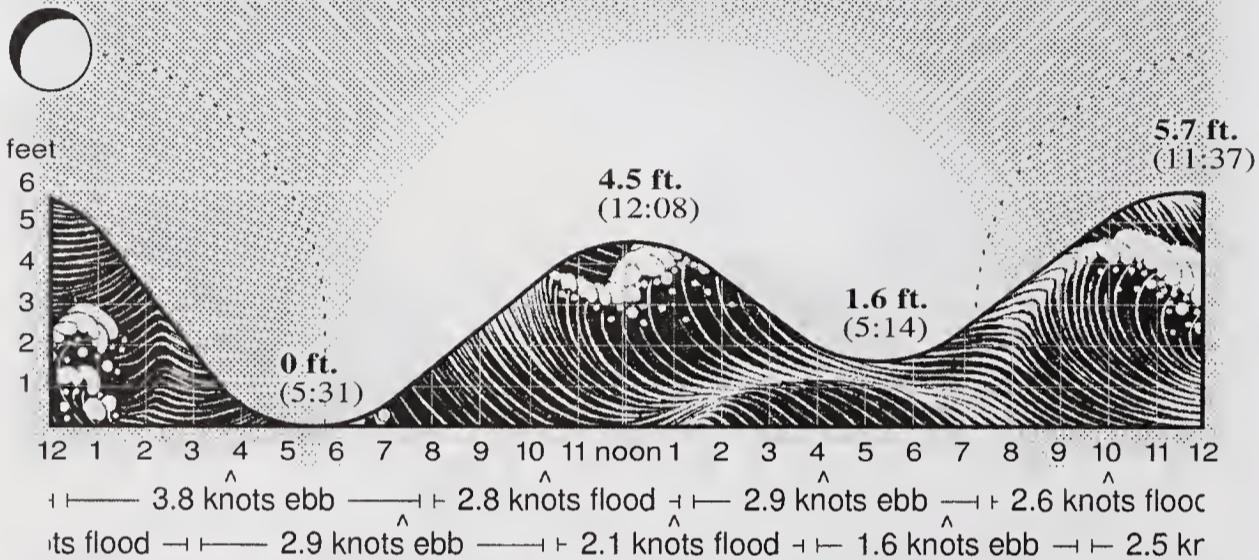


Eta Aquarids Meteor Shower The Eta Aquarids run annually from April 19th to May 28th. This year's peak falls on the night and morning of May 6th and 7th. At peak the Eta Aquarids can produce up to 30 meteors per hour. It is believed this shower is a remnant of Comet Halley. The Eta Aquarids travel across the sky at a fast rate sometimes leaving glowing "trains" of incandescent bits of debris in the wake that can persist for several seconds. The radiant point of Eta Aquarids is the constellation Aquarius - the water bearer. Aquarius will appear above the eastern horizon at approximately 2:00 a.m. on the morning of the 7th. Because Eta Aquarids' apparent radiate point is low in the night sky, they are often seen as "earthgrazers" appearing to skim the earth's surface at the Horizon.

MON MAY 8 dawn 5:02 sunrise 6:06 sunset 8:07 dark 9:11
moonset 5:14 a.m. moonrise 6:14 p.m.



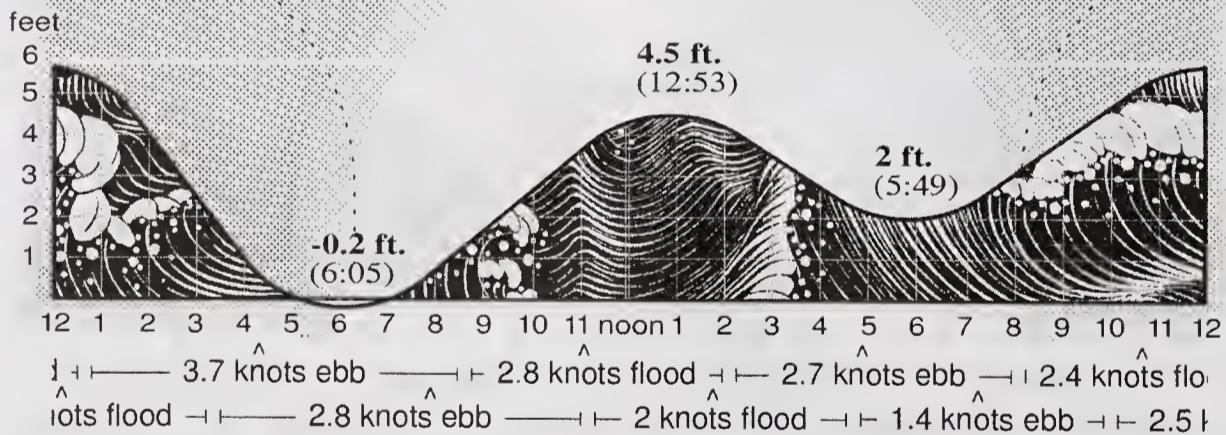
TUE MAY 9 dawn 5:01 sunrise 6:05 sunset 8:08 dark 9:12
moonset 5:45 a.m. moonrise 7:10 p.m.



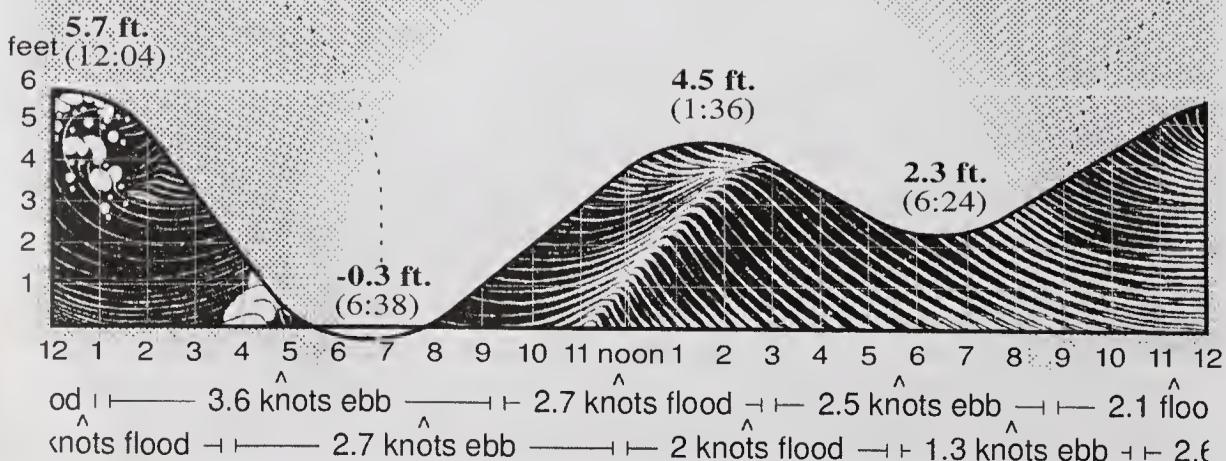
WED MAY 10 dawn 5:00 sunrise 6:04 sunset 8:09 dark 9:14
moonset 6:18 a.m. moonrise 8:06 p.m.



Full Moon 2:42 p.m.



THU MAY 11 dawn 4:59 sunrise 6:03 sunset 8:10 dark 9:15
moonset 6:53 a.m. moonrise 9:00 p.m.



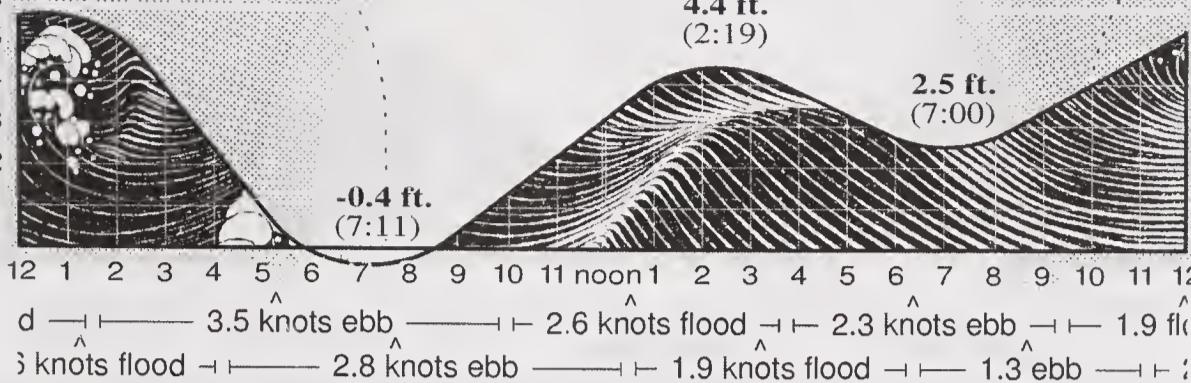
FRI MAY 12

dawn 4:57 sunrise 6:02 sunset 8:11 dark 9:16
moonset 7:31 a.m. moonrise 9:53 p.m.



apogee

feet 5.6 ft.
(12:33)

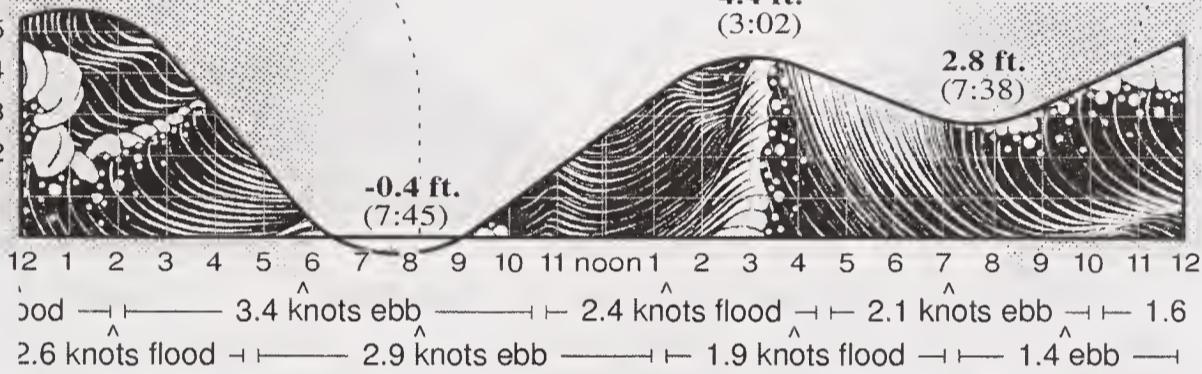


SAT MAY 13

dawn 4:56 sunrise 6:01 sunset 8:12 dark 9:17
moonset 8:12 a.m. moonrise 10:44 p.m.



feet 5.5 ft.
(1:03)



SUN MAY 14

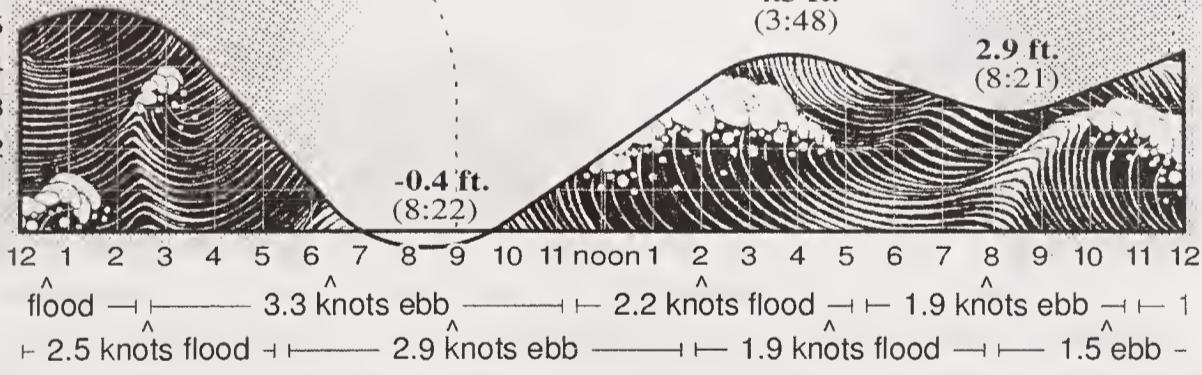
dawn 4:55 sunrise 6:01 sunset 8:12 dark 9:18
moonset 8:58 a.m. moonrise 1:33 p.m.



South

Mothers' Day

feet 5.4 ft.
(1:36)



S

V

m

J

MON MAY 15

dawn 4:54 sunrise 6:00 sunset 8:13 dark 9:19
moonset 9:47 a.m.



feet 5.2 ft.
(2:13)



4.3 ft.
(4:37)

3.1 ft.
(9:12)

-0.2 ft.
(9:03)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
1.4 flood → 3.1 knots ebb → 2 knots flood → 1.7 knots ebb →
→ 2.4 knots flood → 2.9 knots ebb → 1.9 knots flood → 1.6 knots

TUE MAY 16

dawn 4:53 sunrise 5:59 sunset 8:14 dark 9:20
moonrise 12:18 a.m. moonset 10:39 a.m.



feet 4.9 ft.
(2:55)



4.3 ft.
(5:29)

3.1 ft.
(10:18)

-0.1 ft.
(9:49)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
- 1.1 flood → 2.9 knots ebb → 1.9 knots flood → 1.7 knots ebb
ebb → 2.2 knots flood → 2.8 knots ebb → 2 knots flood → 1.7 kr

WED MAY 17

dawn 4:52 sunrise 5:58 sunset 8:15 dark 9:21
moonrise 1:00 a.m. moonset 11:35 a.m.



feet 4.6 ft.
(3:47)



4.4 ft.
(6:21)

2.9 ft.
(11:36)

0.1 ft.
(10:40)

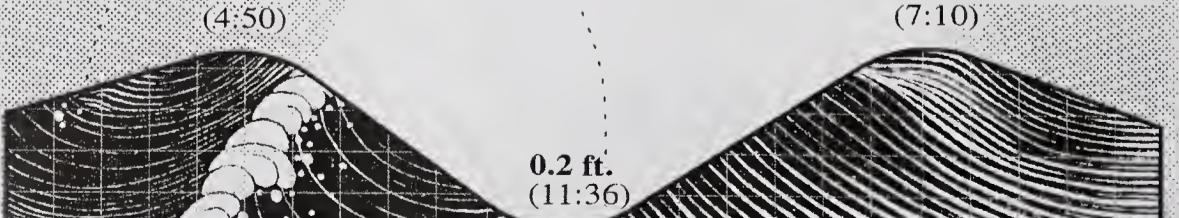
12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
→ 0.9 flood → 2.7 knots ebb → 1.9 knots flood → 1.7 knots e
bb → 2 knots flood → 2.7 knots ebb → 2.1 knots flood → 1.8

THU MAY 18

dawn 4:51 sunrise 5:57 sunset 8:16 dark 9:22
moonrise 1:39 a.m. moonset 12:33 p.m.



feet 4.4 ft.
(4:50)



4.6 ft.
(7:10)

0.2 ft.
(11:36)

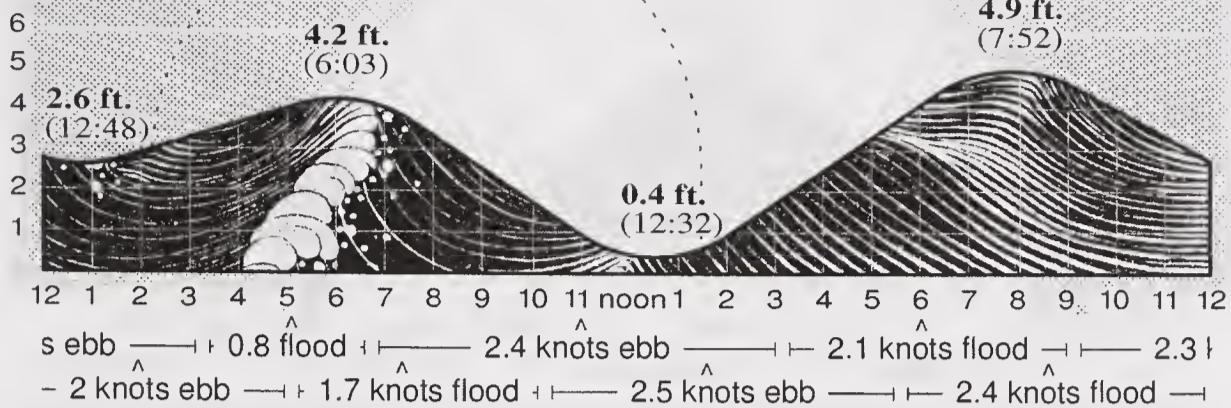
12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
ebb → 0.8 flood → 2.5 knots ebb → 2 knots flood → 2 knot
3 knots ebb → 1.8 knots flood → 2.6 knots ebb → 2.3 knots flood →

FRI MAY 19

dawn 4:50 sunrise 5:57 sunset 8:17 dark 9:23
moonrise 2:15 a.m. moonset 1:34 p.m.



feet

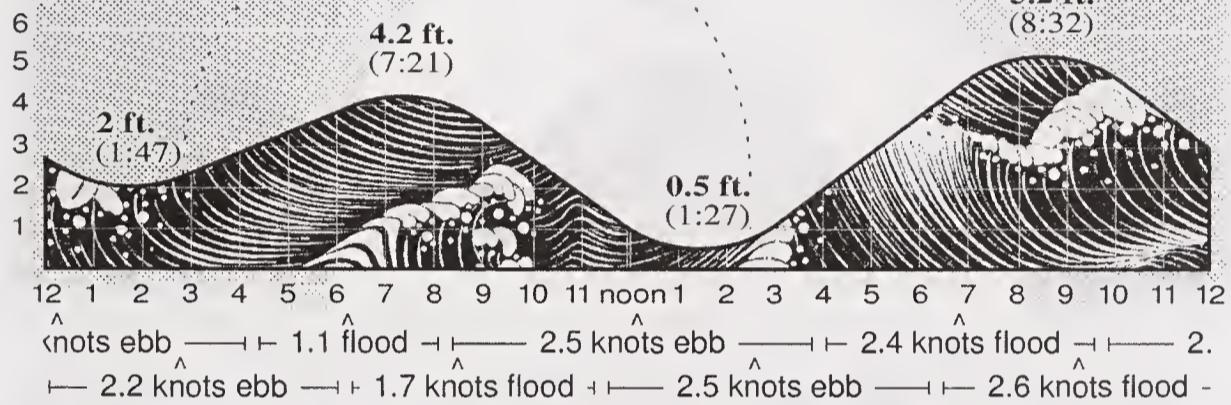


SAT MAY 20

dawn 4:49 sunrise 5:56 sunset 8:17 dark 9:24
moonrise 2:51 a.m. moonset 2:37 p.m.



feet



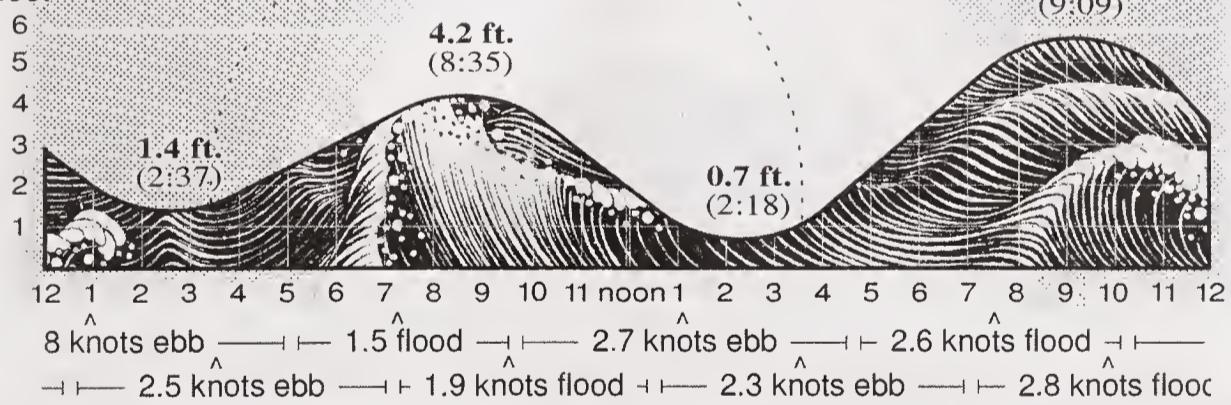
SUN MAY 21

dawn 4:48 sunrise 5:55 sunset 8:18 dark 9:25
moonrise 3:26 a.m. moonset 3:42 p.m.



equator

feet



S

V

M

J

MON MAY 22

dawn 4:47 sunrise 5:54 sunset 8:19 dark 9:26
moonrise 4:02 a.m. moonset 4:50 p.m.

National Maritime Day

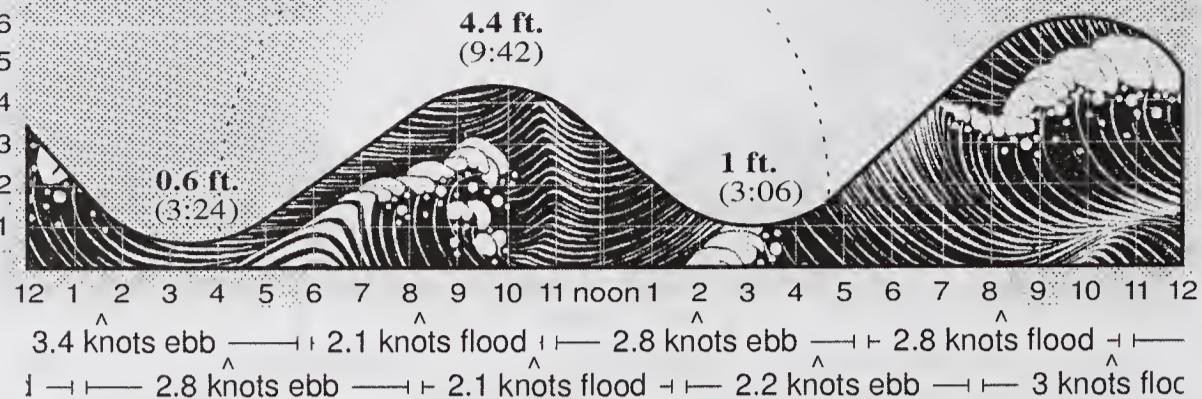


feet

4.4 ft.
(9:42)

1 ft.
(3:06)

6 ft.
(9:47)



TUE MAY 23

dawn 4:47 sunrise 5:54 sunset 8:20 dark 9:27
moonrise 4:39 a.m. moonset 6:00 p.m.

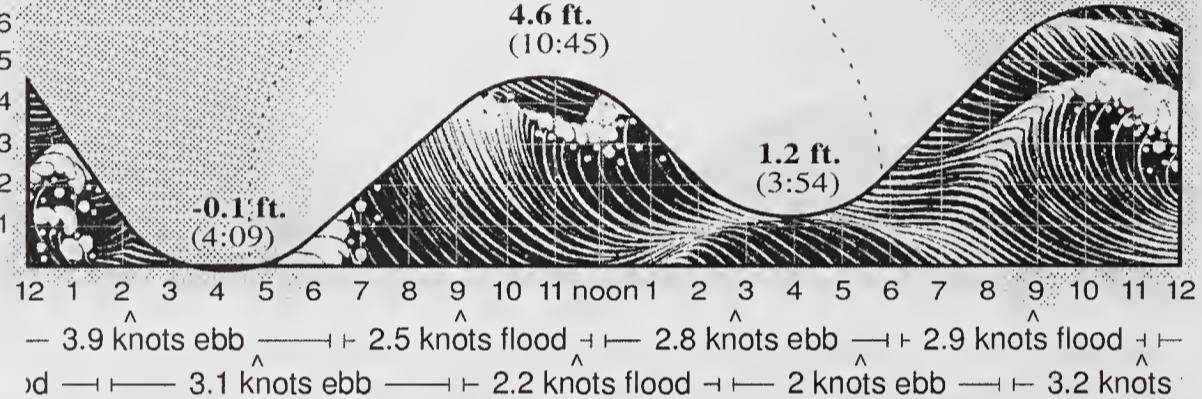


feet

4.6 ft.
(10:45)

1.2 ft.
(3:54)

6.3 ft.
(10:26)



WED MAY 24

dawn 4:46 sunrise 5:53 sunset 8:21 dark 9:28
moonrise 5:21 a.m. moonset 7:12 p.m.

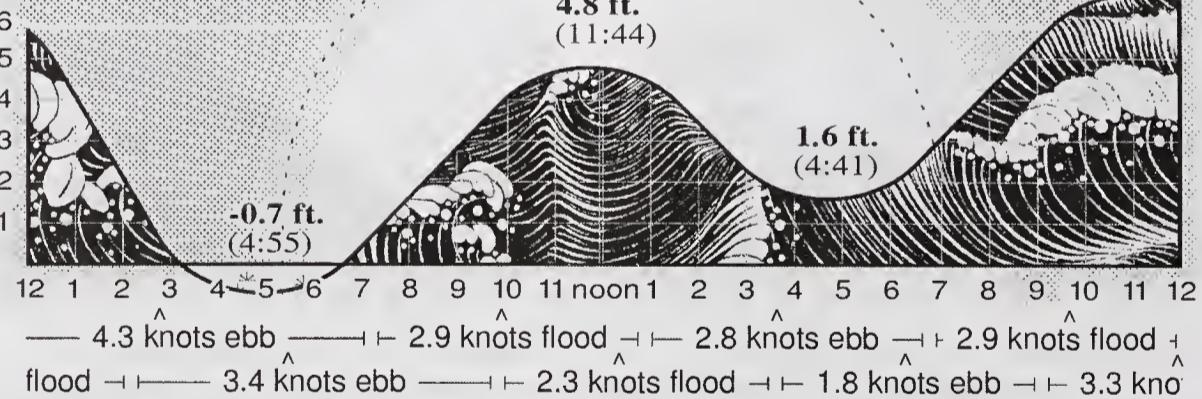


feet

4.8 ft.
(11:44)

1.6 ft.
(4:41)

6.6 ft.
(11:06)



THU MAY 25

dawn 4:45 sunrise 5:53 sunset 8:21 dark 9:29
moonrise 6:06 a.m. moonset 8:24 p.m.

New Moon 12:44 p.m.

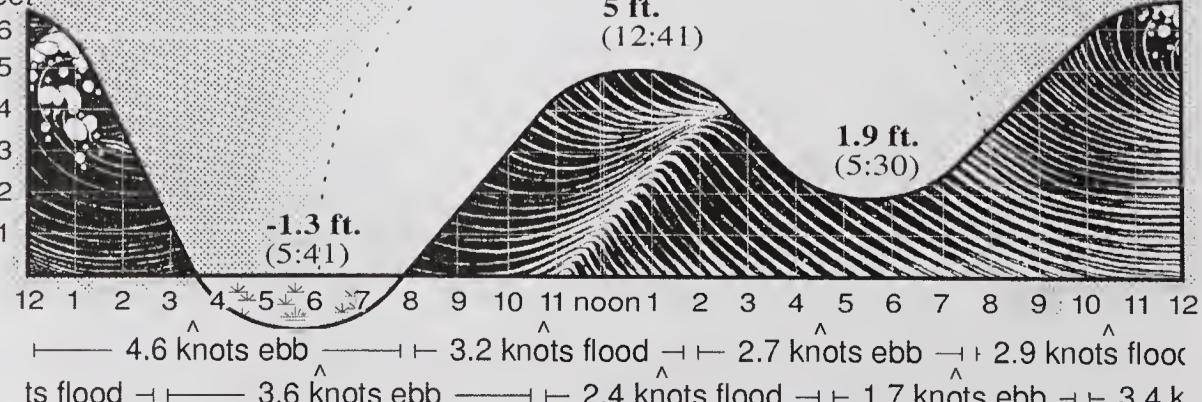


feet

5 ft.
(12:41)

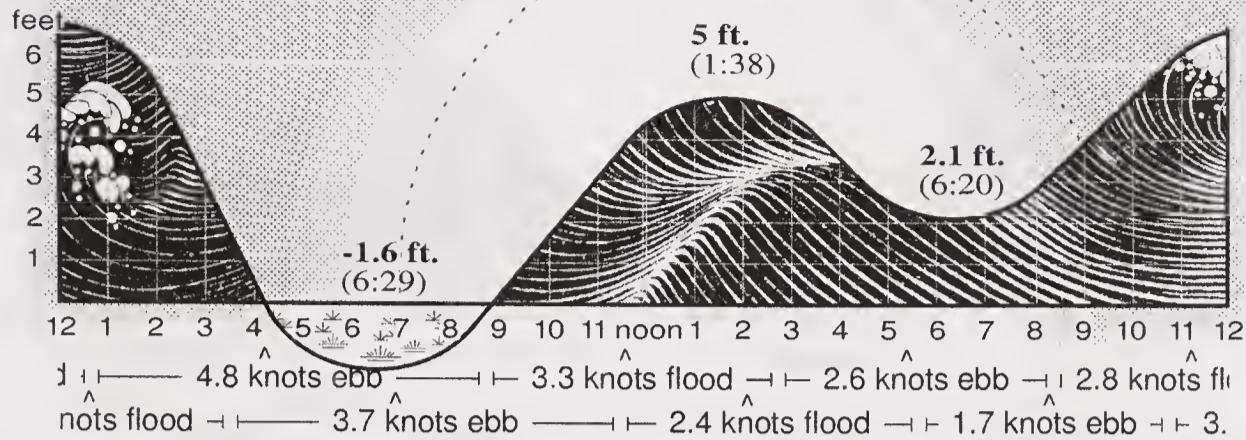
1.9 ft.
(5:30)

6.7 ft.
(11:49)



FRI MAY 26

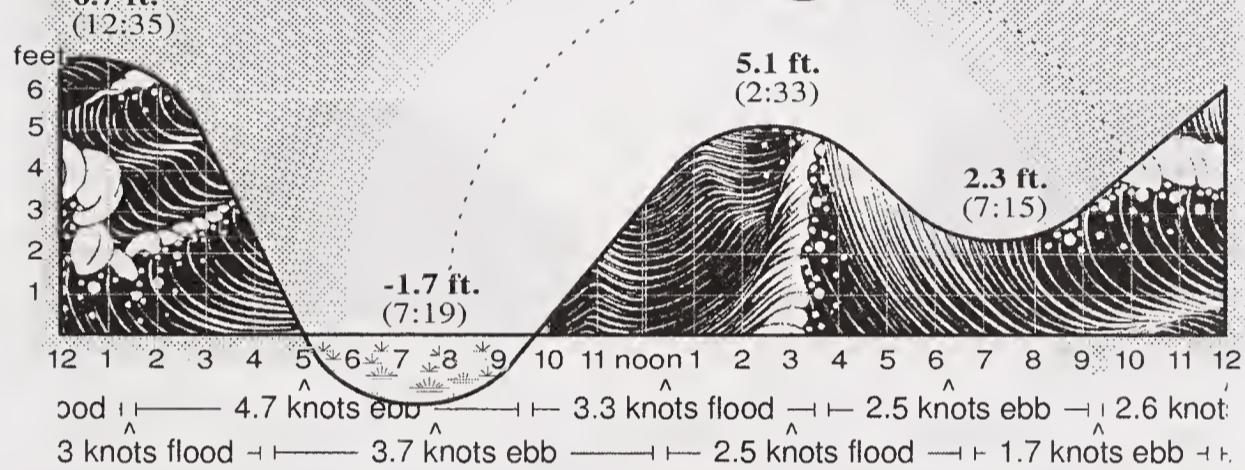
dawn 4:44 sunrise 5:52 sunset 8:22 dark 9:30
moonrise 6:58 a.m. moonset 9:33 p.m.



SAT MAY 27

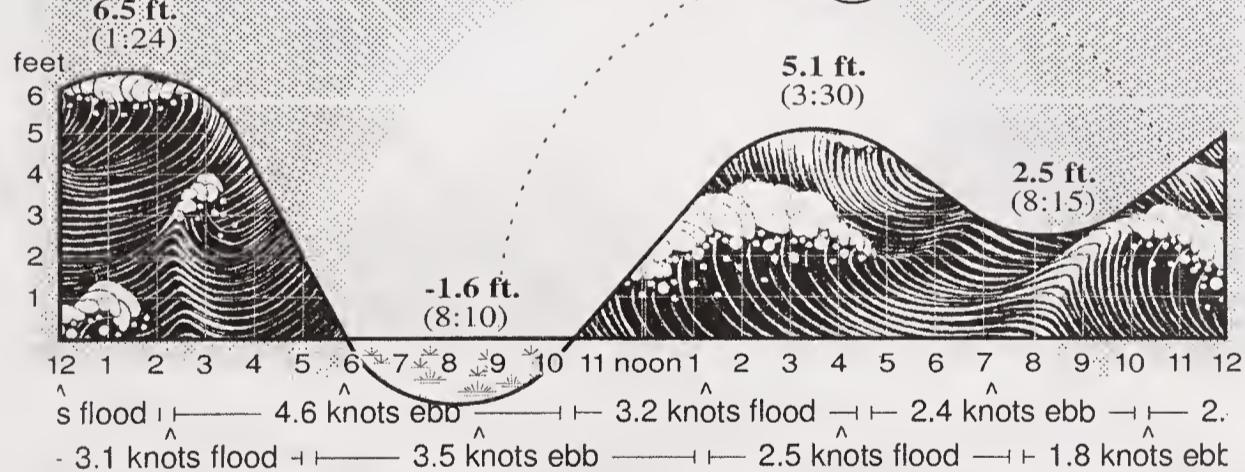
dawn 4:44 sunrise 5:52 sunset 8:23 dark 9:31
moonrise 7:56 a.m. moonset 10:36 p.m.

Ramadan Starts



SUN MAY 28

dawn 4:43 sunrise 5:51 sunset 8:24 dark 9:32
moonrise 8:58 a.m. moonset 11:33 p.m.



S

V

M

J

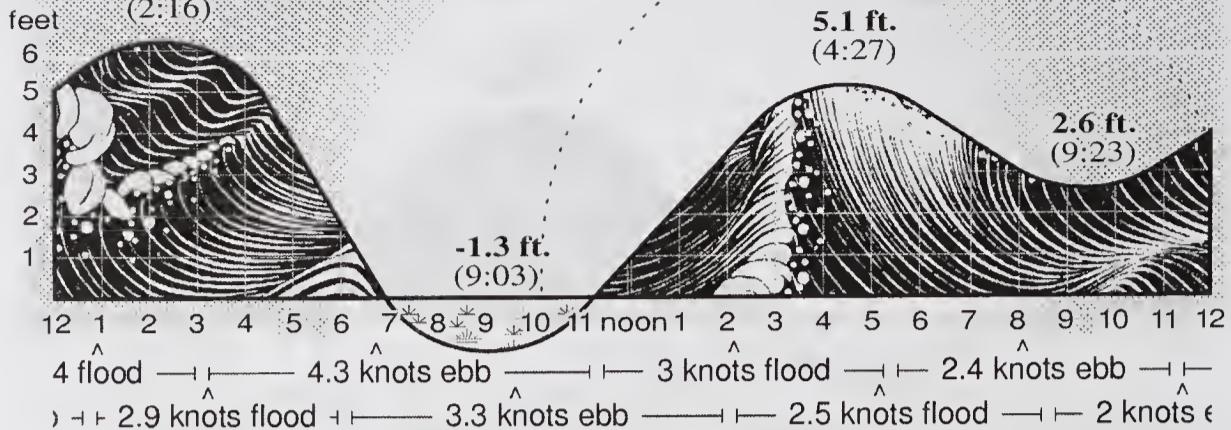
MON MAY 29

dawn 4:42 sunrise 5:51 sunset 8:24 dark 9:33
moonrise 10:03 a.m.

Memorial Day



6.2 ft.
(2:16)

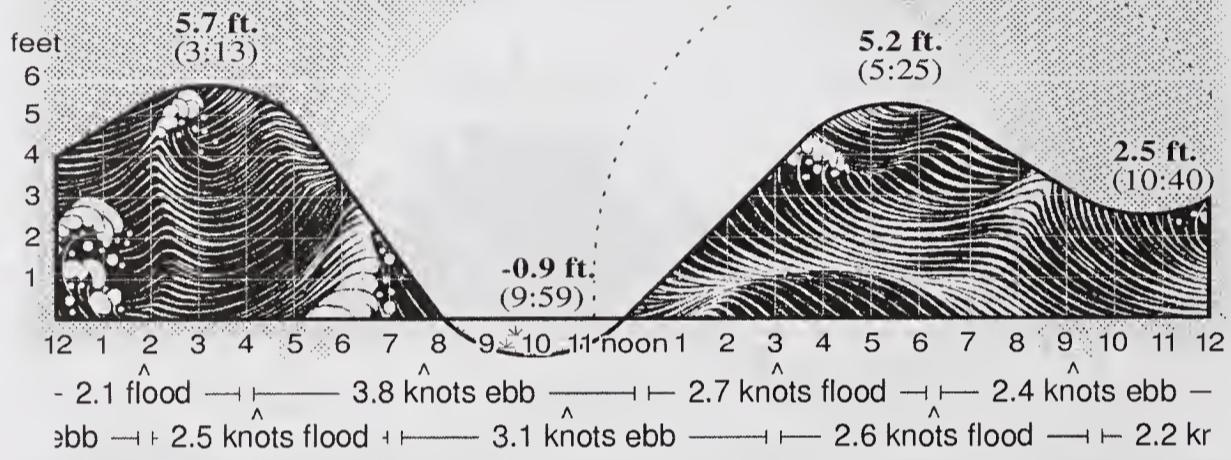


TUE MAY 30

dawn 4:42 sunrise 5:50 sunset 8:25 dark 9:34
moonset 12:21 a.m. moonrise 11:08 a.m.



5.7 ft.
(3:13)

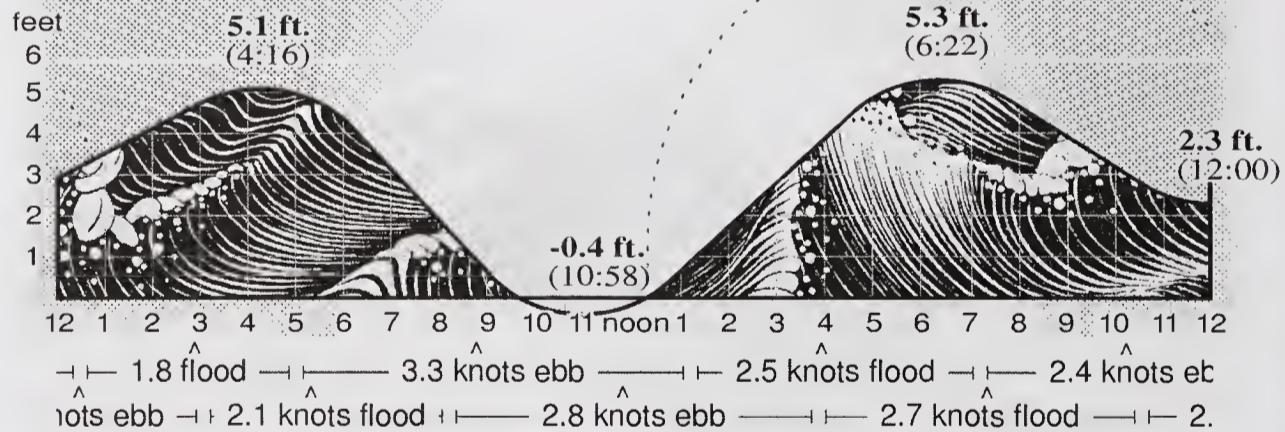


WED MAY 31

dawn 4:41 sunrise 5:50 sunset 8:26 dark 9:35
moonset 1:04 a.m. moonrise 12:12 p.m.



5.1 ft.
(4:16)

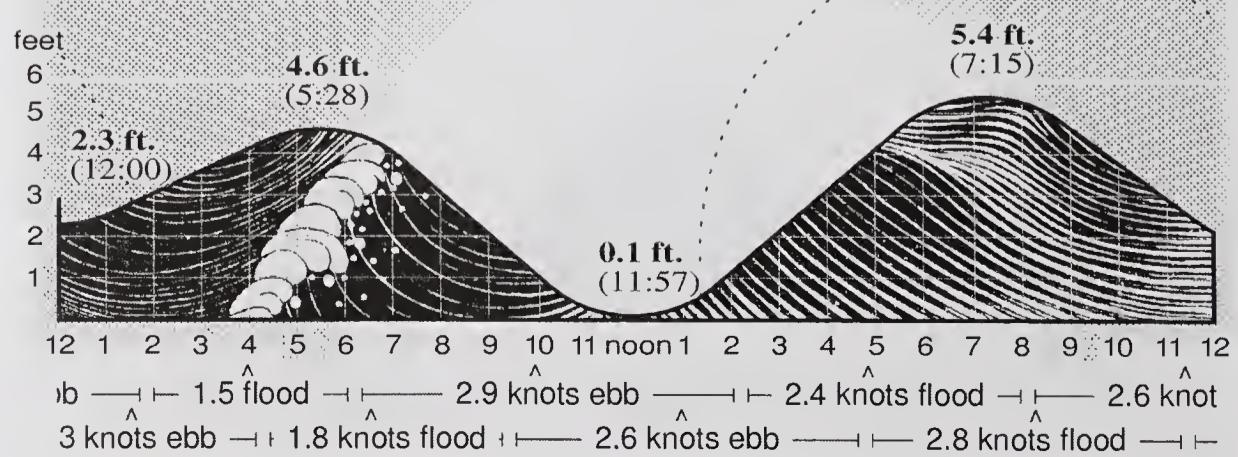


THU JUN 1

dawn 4:40 sunrise 5:49 sunset 8:26 dark 9:36
moonset 1:41 a.m. moonrise 1:14 p.m.



4.6 ft.
(5:28)



FRI JUN 2

dawn 4:40 sunrise 5:49 sunset 8:27 dark 9:36
moonset 2:15 a.m. moonrise 2:14 p.m.



feet

6
5
4
3
2
1

4.2 ft.
(6:47)

1.8 ft.
(1:13)

0.5 ft.
(12:55)

5.6 ft.
(8:03)

12 1 2 3 4 5 6 7 8 9 10 noon 1 2 3 4 5 6 7 8 9 10 11 12
s ebb ——— ^ 1.4 flood ——— ^ 2.7 knots ebb ——— ^ 2.3 knots flood ——— 2.9 ft
— 2.5 knots ebb ——— ^ 1.7 knots flood ——— ^ 2.4 knots ebb ——— ^ 2.8 knots flood —

SAT JUN 3

dawn 4:40 sunrise 5:49 sunset 8:28 dark 9:37
moonset 2:47 a.m. moonrise 3:12 p.m.

Venus Western Elongation

equator



feet

6
5
4
3
2
1

4.1 ft.
(8:06)

1.3 ft.
(2:16)

1 ft.
(1:49)

5.7 ft.
(8:46)

12 1 2 3 4 5 6 7 8 9 10 noon 1 2 3 4 5 6 7 8 9 10 11 12
^ knots ebb ——— ^ 1.5 flood ——— ^ 2.6 knots ebb ——— ^ 2.3 knots flood ——— 3
— 2.8 knots ebb ——— ^ 1.8 knots flood ——— ^ 2.1 knots ebb ——— ^ 2.8 knots flood —

SUN JUN 4

dawn 4:39 sunrise 5:49 sunset 8:28 dark 9:38
moonset 3:18 a.m. moonrise 4:09 p.m.



feet

6
5
4
3
2
1

4.1 ft.
(9:19)

0.9 ft.
(3:10)

1.4 ft.
(2:38)

5.8 ft.
(9:23)

12 1 2 3 4 5 6 7 8 9 10 noon 1 2 3 4 5 6 7 8 9 10 11 12
^ .2 knots ebb ——— ^ 1.9 knots flood ——— ^ 2.6 knots ebb ——— ^ 2.4 knots flood ———
— 3 knots ebb ——— ^ 1.9 knots flood ——— ^ 1.9 knots ebb ——— ^ 2.7 knots floo



Venus at Greatest Western Elongation On the morning of June 3 Venus will be at its highest point above the Horizon in the eastern morning sky. This will present the best opportunity to view our closest planetary neighbor.

MON JUN 5

dawn 4:39 sunrise 5:48 sunset 8:29 dark 9:39
moonset 3:48 a.m. moonrise 5:05 p.m.



feet

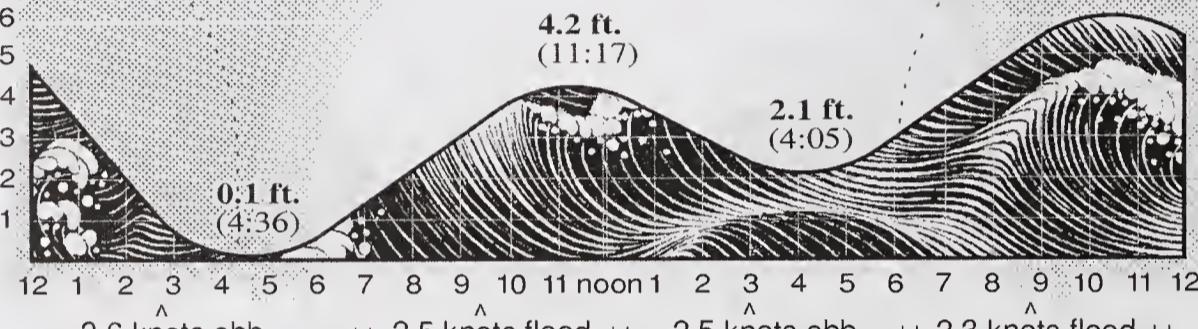


TUE JUN 6

dawn 4:38 sunrise 5:48 sunset 8:29 dark 9:39
moonset 4:20 a.m. moonrise 6:00 p.m.



feet

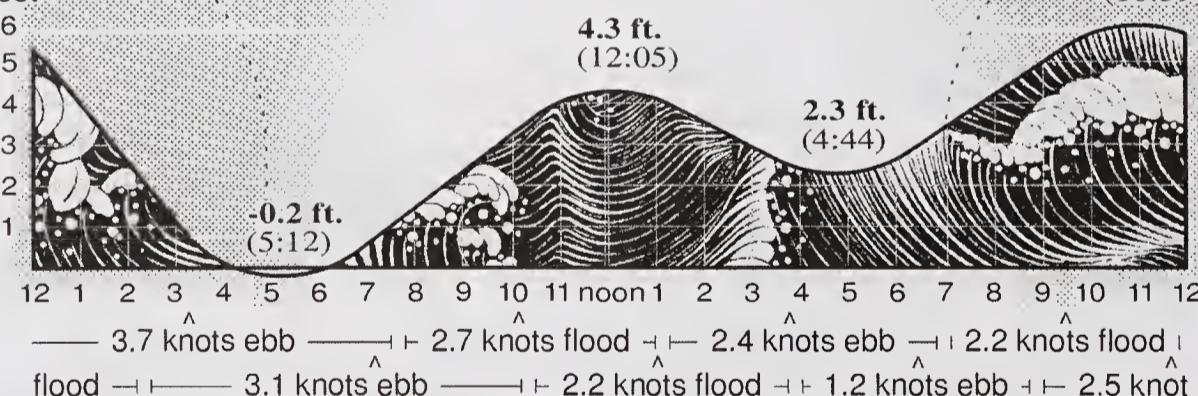


WED JUN 7

dawn 4:38 sunrise 5:48 sunset 8:30 dark 9:40
moonset 4:54 a.m. moonrise 6:55 p.m.



feet



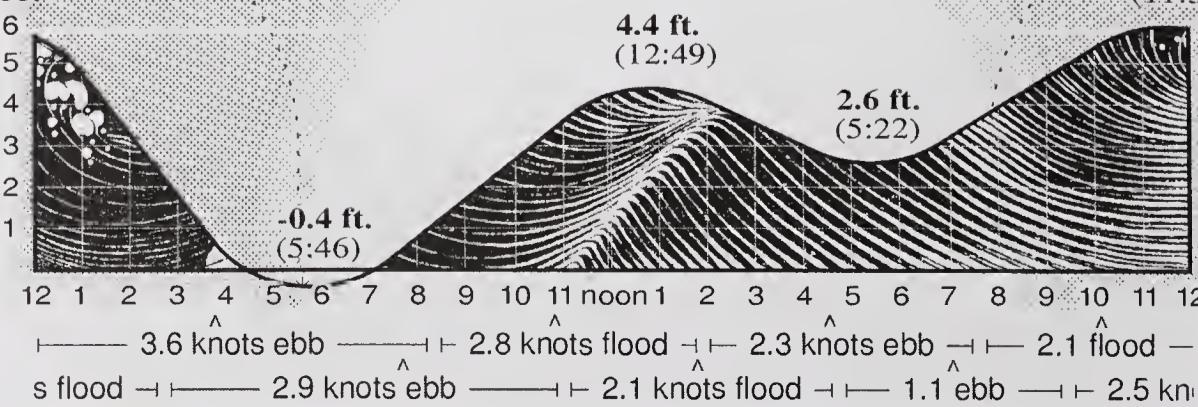
THU JUN 8

dawn 4:38 sunrise 5:48 sunset 8:31 dark 9:41
moonset 5:31 a.m. moonrise 7:49 p.m.

World Oceans Day



feet



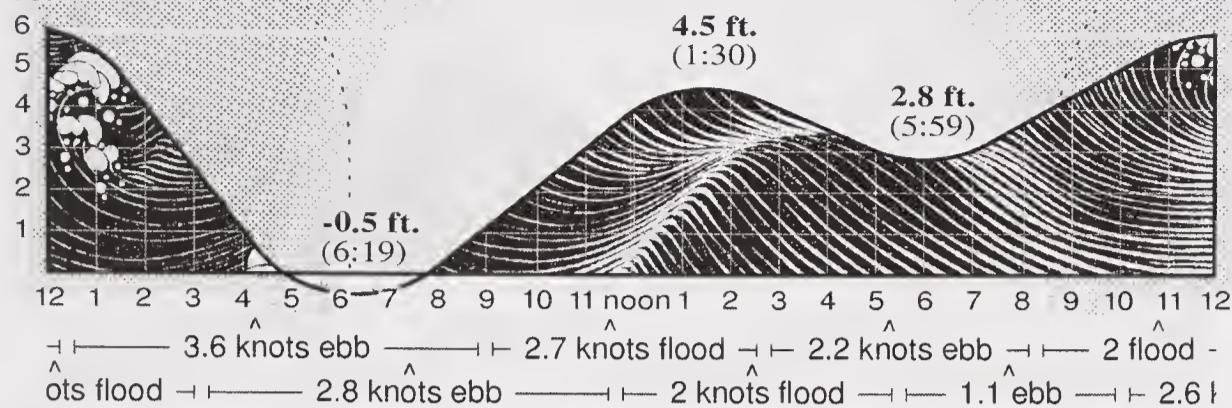
FRI JUN 9

dawn 4:38 sunrise 5:48 sunset 8:31 dark 9:41
moonset 6:11 a.m. moonrise 8:41 p.m.



Full Moon 6:10 a.m.

feet



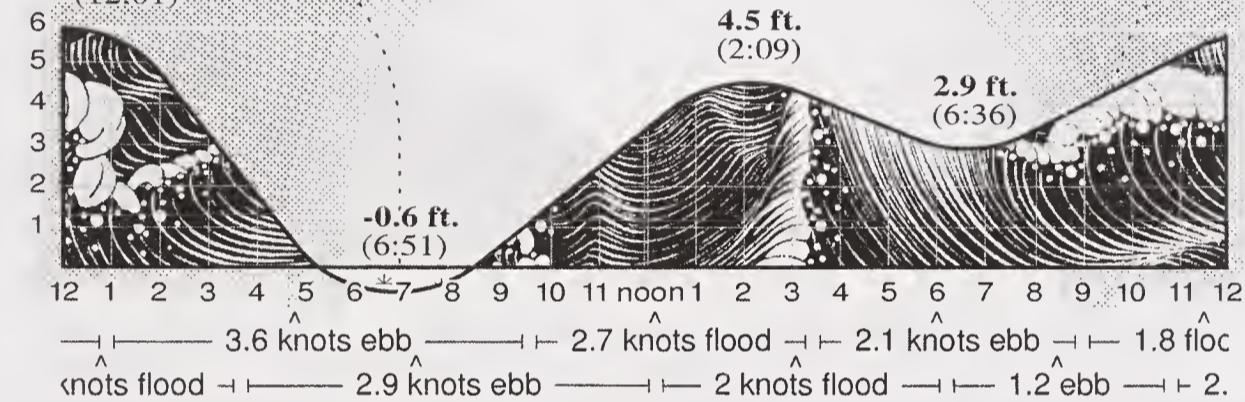
SAT JUN 10

dawn 4:37 sunrise 5:47 sunset 8:32 dark 9:42
moonset 6:55 a.m. moonrise 9:31 p.m.



South

5.8 ft.
feet (12:01)

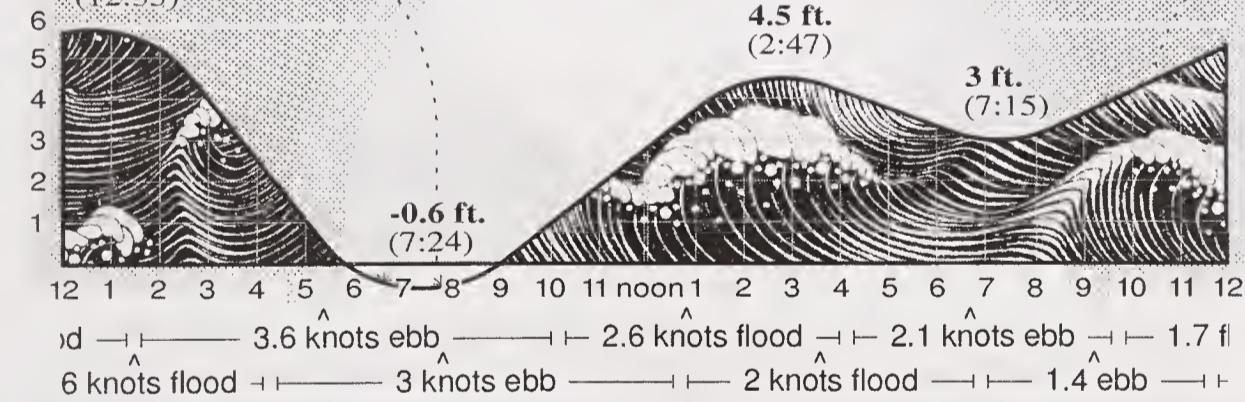


SUN JUN 11

dawn 4:37 sunrise 5:47 sunset 8:32 dark 9:42
moonset 7:43 a.m. moonrise 10:17 p.m.



5.7 ft.
feet (12:35)



S

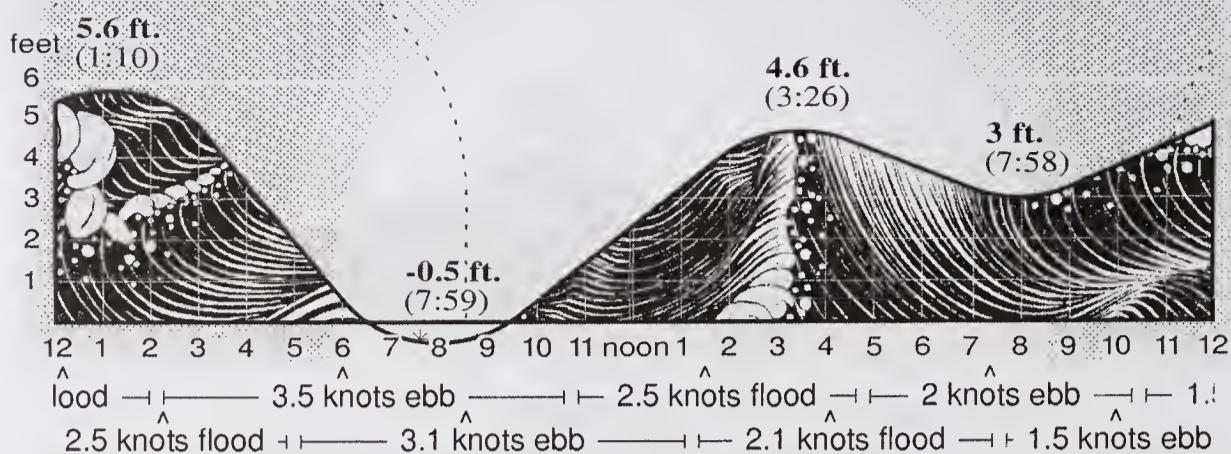
V

M

J

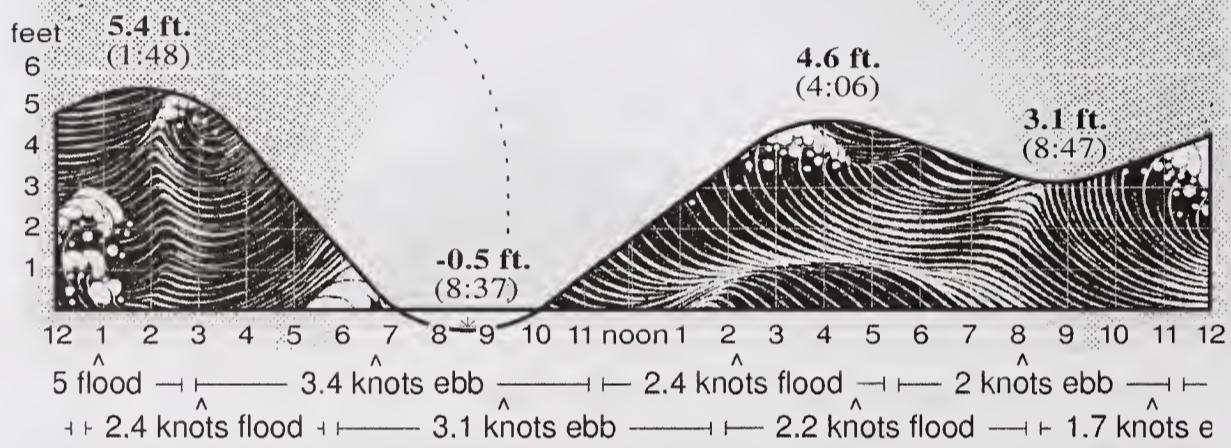
MON JUN 12

dawn 4:37 sunrise 5:47 sunset 8:32 dark 9:43
moonset 8:34 a.m. moonrise 11:00 p.m.



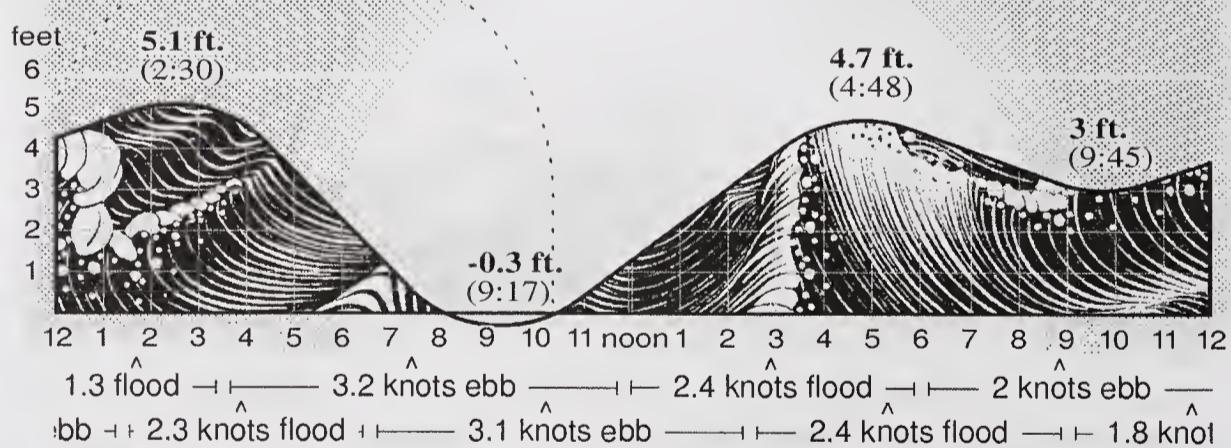
TUE JUN 13

dawn 4:37 sunrise 5:47 sunset 8:33 dark 9:43
moonset 9:29 a.m. moonrise 1:140 p.m.



WED JUN 14

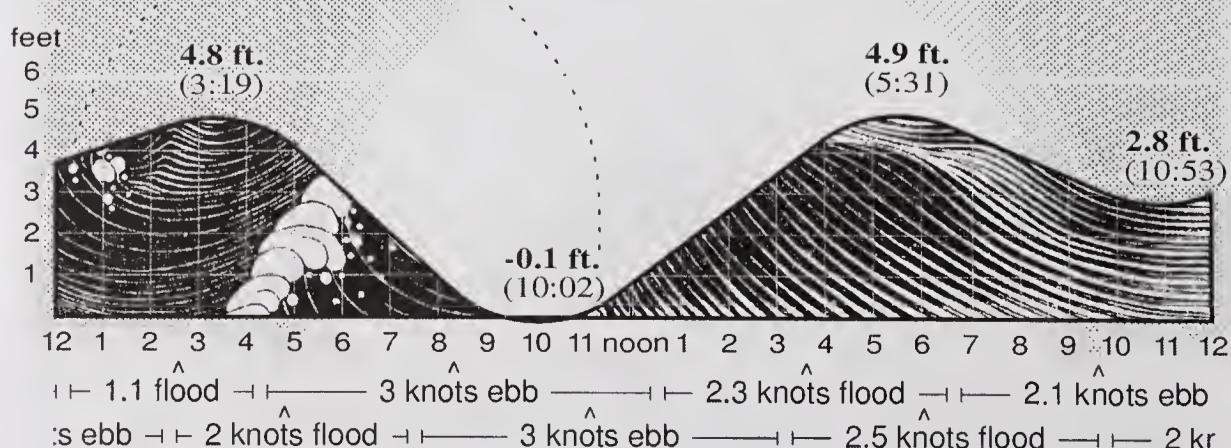
dawn 4:37 sunrise 5:47 sunset 8:33 dark 9:44
moonset 10:26 a.m.



THU JUN 15

dawn 4:37 sunrise 5:47 sunset 8:34 dark 9:44
moonrise 12:17 a.m. moonset 11:25 a.m.

Saturn at Opposition



FRI JUN 16

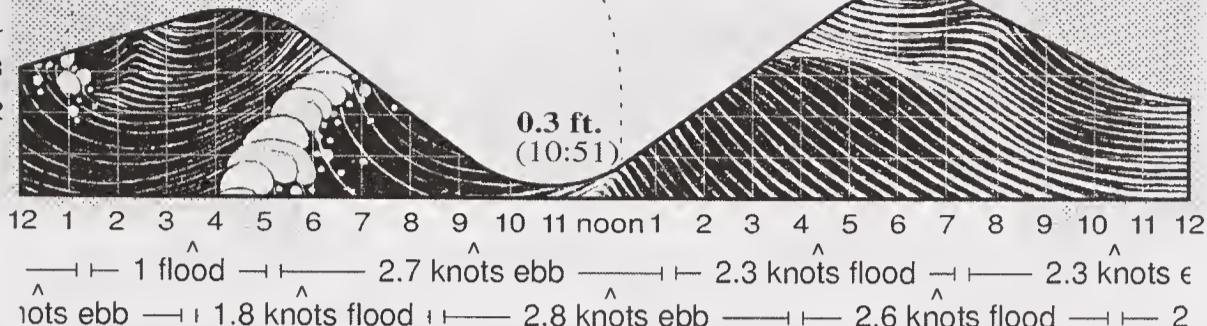
dawn 4:37 sunrise 5:47 sunset 8:34 dark 9:45
moonrise 12:52 a.m. moonset 12:25 p.m.



feet

6
5
4
3
2
1
4.5 ft.
(4:18)

5.1 ft.
(6:15)



SAT JUN 17

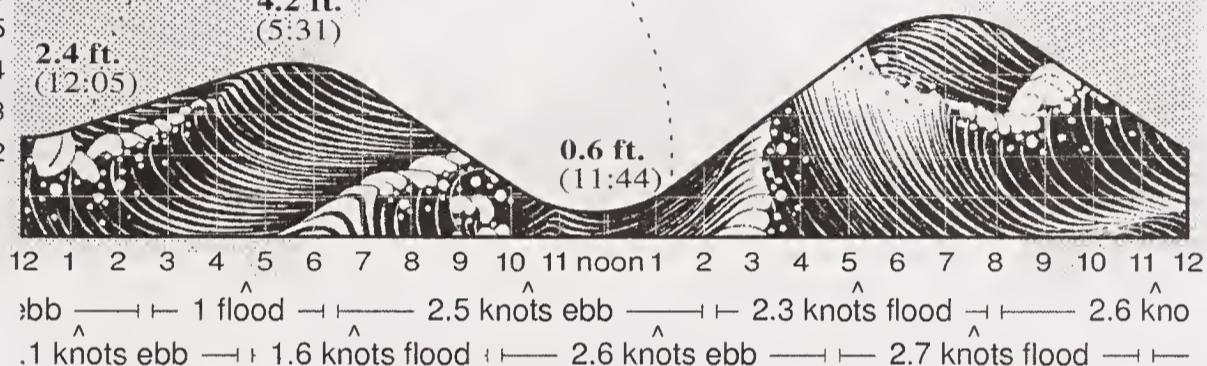
dawn 4:37 sunrise 5:48 sunset 8:34 dark 9:45
moonrise 1:26 a.m. moonset 1:27 p.m.



feet

6
5
4
3
2
1
2.4 ft.
(12:05)

5.4 ft.
(6:59)



SUN JUN 18

dawn 4:37 sunrise 5:48 sunset 8:35 dark 9:45
moonrise 2:00 a.m. moonset 2:32 p.m.

Fathers' Day



equator

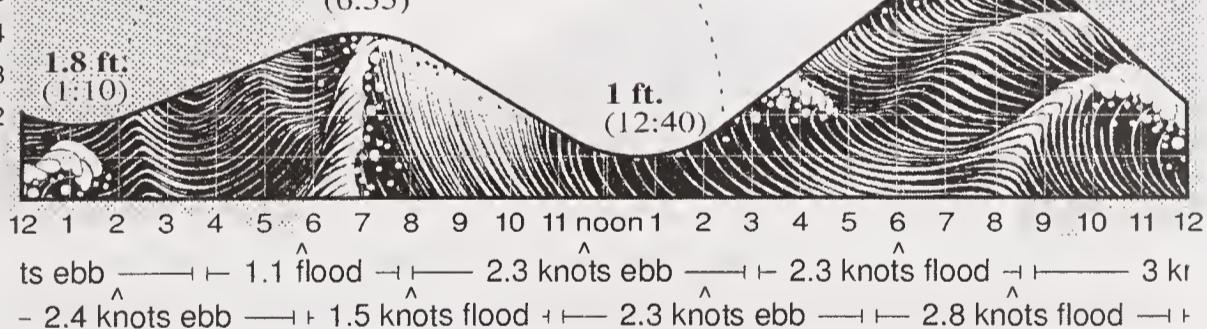
feet

6
5
4
3
2
1
1.8 ft.
(1:10)

5.7 ft.
(7:41)

4 ft.
(6:55)

1 ft.
(12:40)



Saturn at Opposition At opposition brings the ringed planet Saturn to its closest approach to Earth. The Sun will fully illuminate Saturn's face making it visible all night. Although Saturn is at its closest to Earth it is still so distant that a medium sized telescope is required to make out its rings or moons.

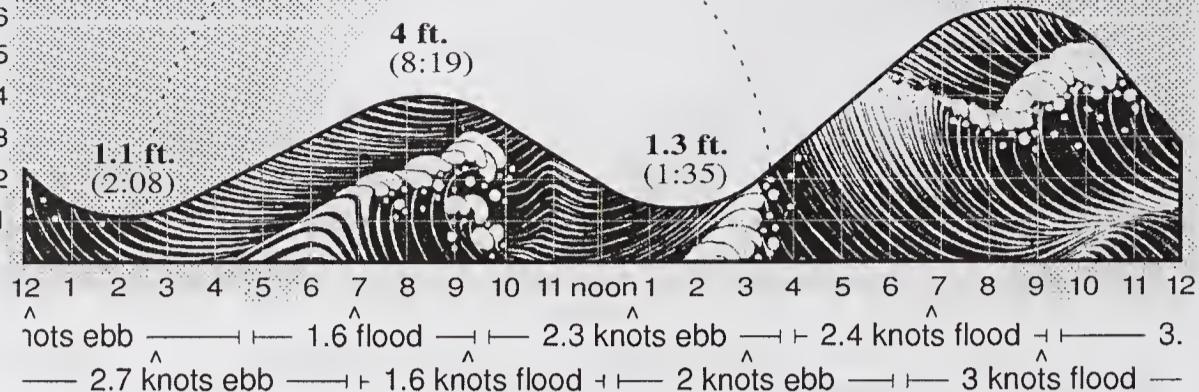
MON JUN 19

dawn 4:37 sunrise 5:48 sunset 8:35 dark 9:46
moonrise 2:35 a.m. moonset 3:39 p.m.



6.1 ft.
(8:24)

feet



TUE JUN 20

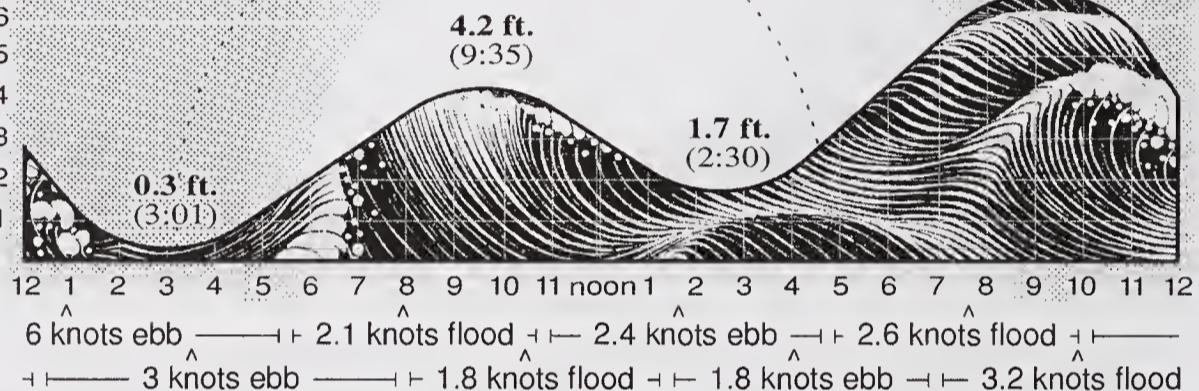
dawn 4:37 sunrise 5:48 sunset 8:35 dark 9:46
moonrise 3:13 a.m. moonset 4:48 p.m.

Summer Solstice 9:24 p.m.



6.5 ft.
(9:08)

feet



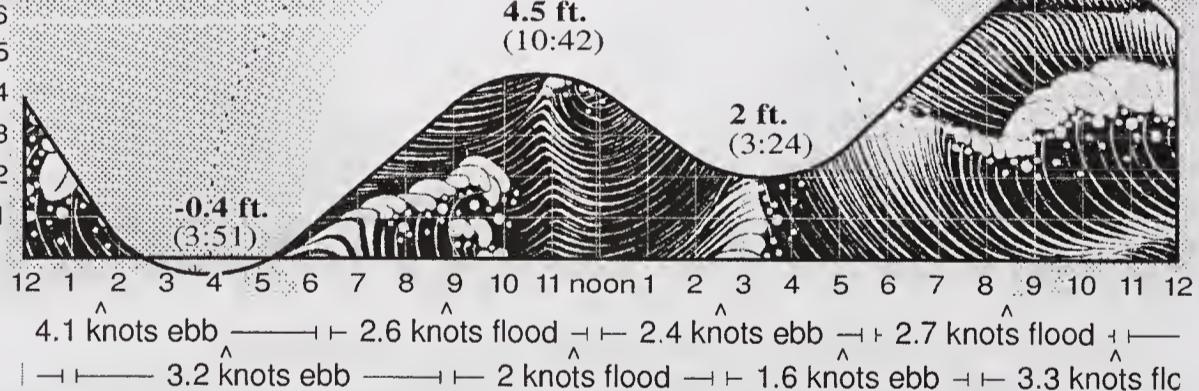
WED JUN 21

dawn 4:38 sunrise 5:48 sunset 8:35 dark 9:46
moonrise 3:55 a.m. moonset 5:59 p.m.



6.8 ft.
(9:53)

feet



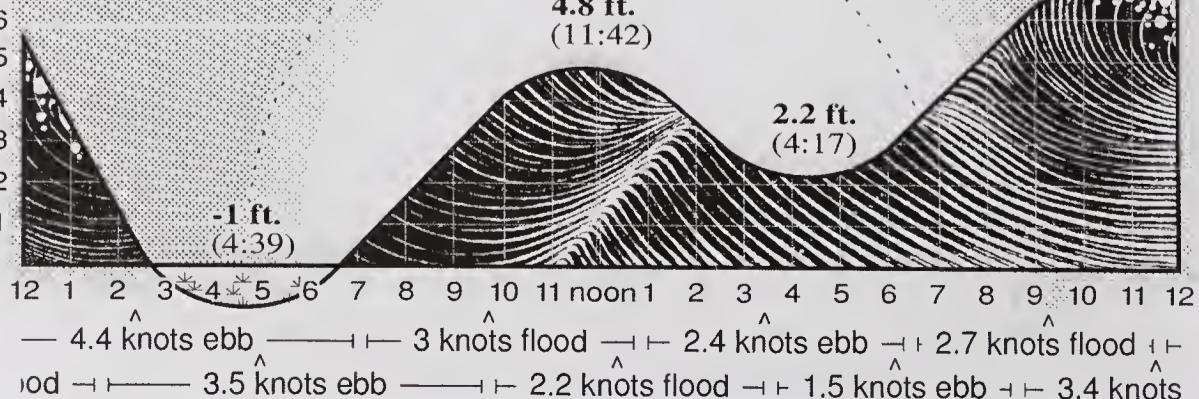
THU JUN 22

dawn 4:38 sunrise 5:49 sunset 8:35 dark 9:46
moonrise 4:43 a.m. moonset 7:09 p.m.



7 ft.
(10:40)

feet

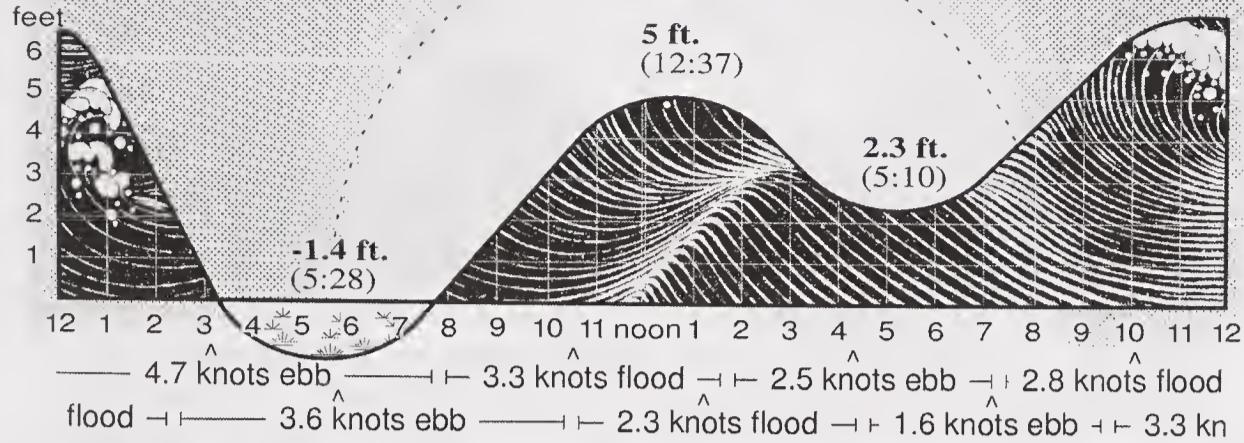


FRI JUN 23

dawn 4:38 sunrise 5:49 sunset 8:36 dark 9:46
moonrise 5:37 a.m. moonset 8:16 p.m.

New Moon 7:31 p.m.

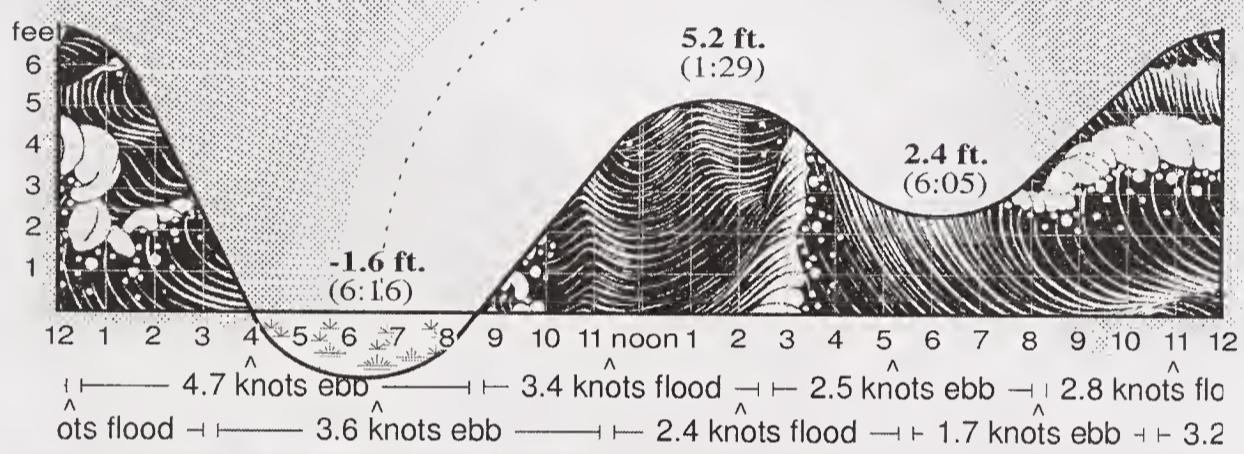
7 ft.
(11:28)



SAT JUN 24

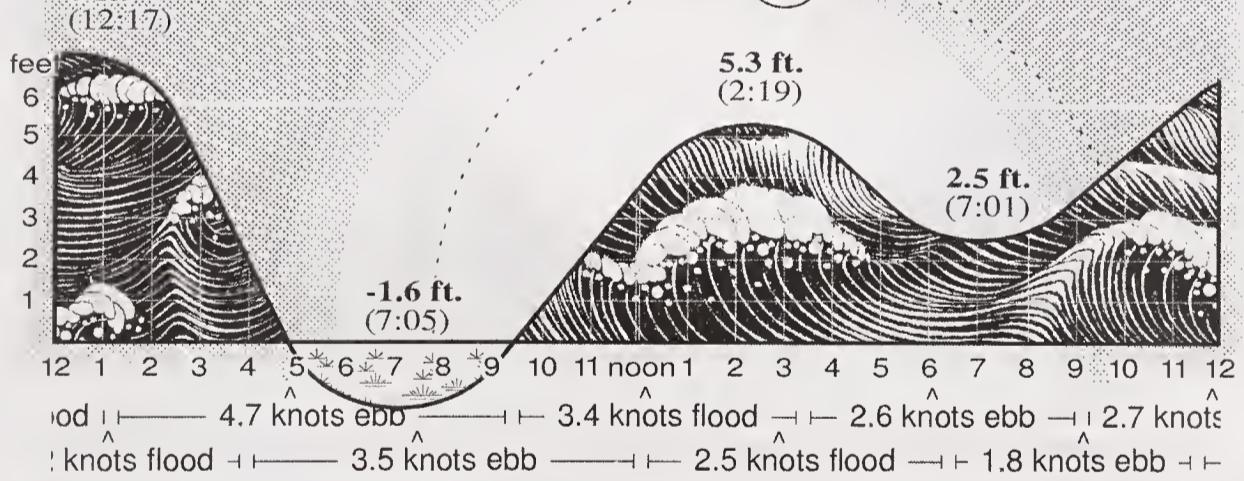
dawn 4:38 sunrise 5:49 sunset 8:36 dark 9:46
moonrise 6:37 a.m. moonset 9:17 p.m.

North



SUN JUN 25

dawn 4:39 sunrise 5:49 sunset 8:36 dark 9:46
moonrise 7:42 a.m. moonset 10:11 p.m.



S

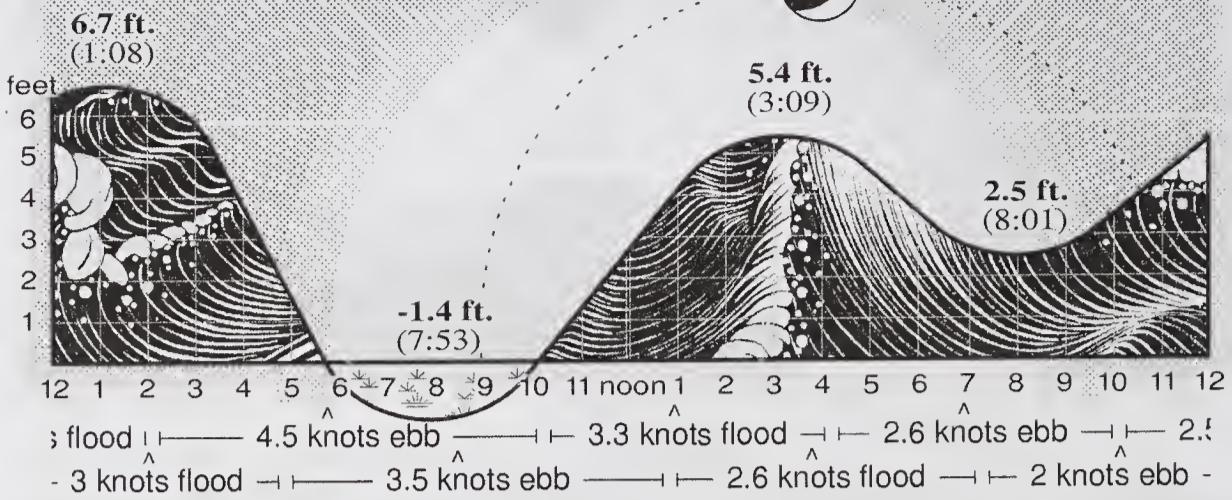
V

J

Summer Solstice The solstice occurs when the north pole of Earth has reached its northermost position in the sky and is directly over the Tropic of Cancer marking the first day of Summer.

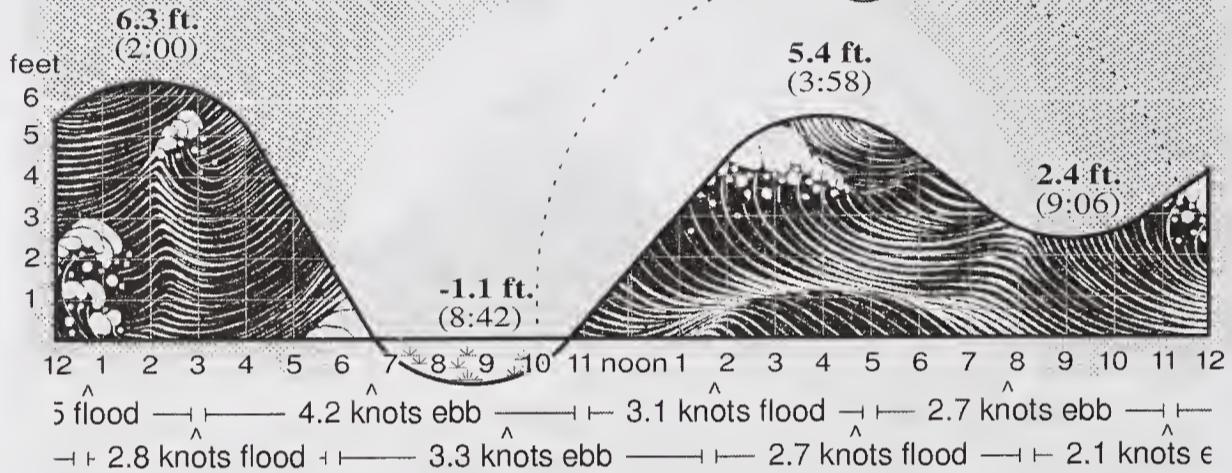
MON JUN 26

dawn 4:39 sunrise 5:50 sunset 8:36 dark 9:46
moonrise 8:49 a.m. moonset 10:58 p.m.



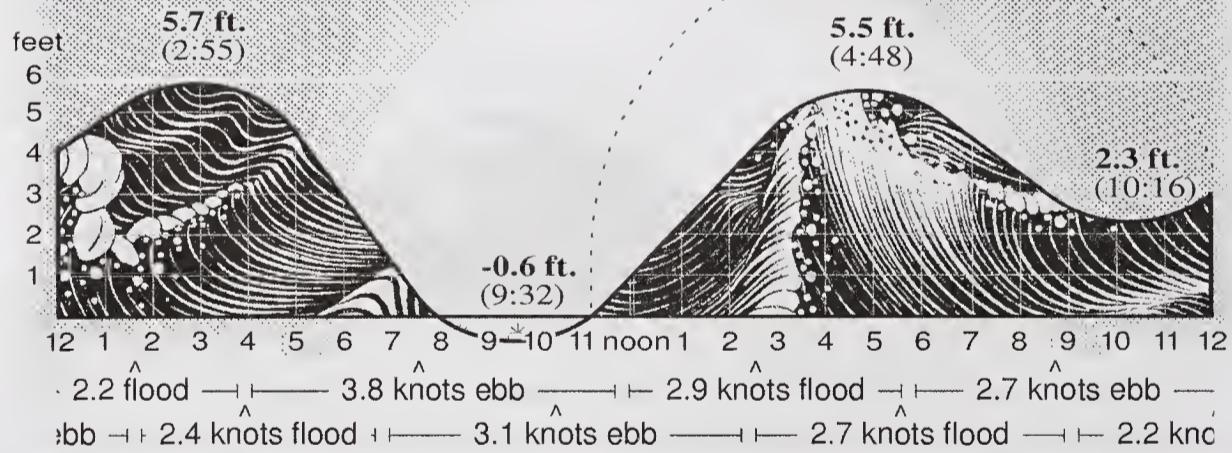
TUE JUN 27

dawn 4:40 sunrise 5:50 sunset 8:36 dark 9:46
moonrise 9:56 a.m. moonset 11:39 p.m.



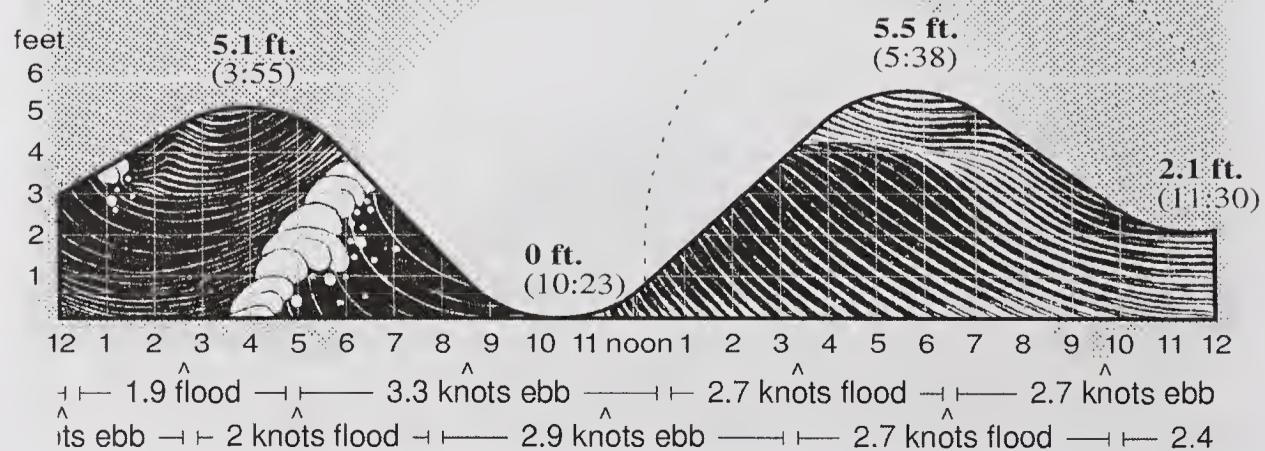
WED JUN 28

dawn 4:40 sunrise 5:50 sunset 8:36 dark 9:46
moonrise 11:01 a.m.



THU JUN 29

dawn 4:41 sunrise 5:51 sunset 8:36 dark 9:46
moonset 12:16 a.m. moonrise 12:03 p.m.

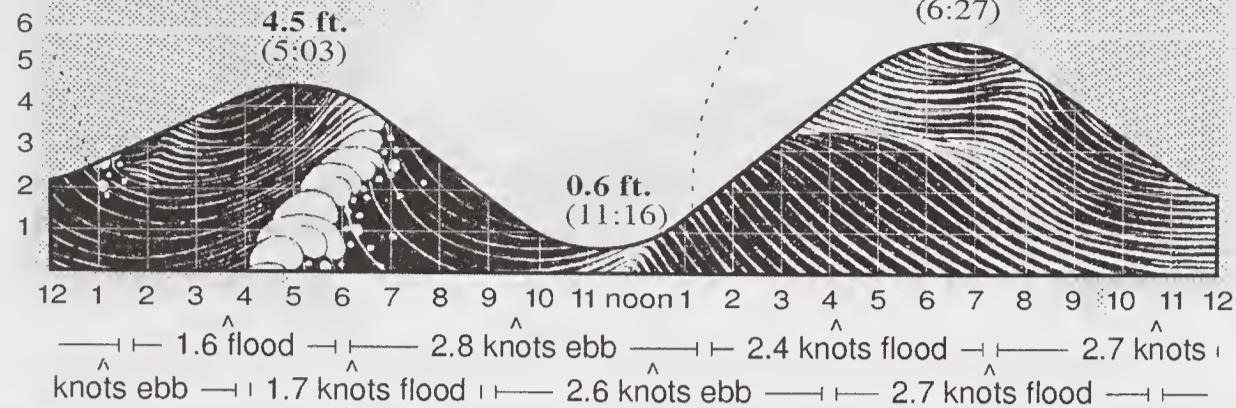


FRI JUN 30

dawn 4:41 sunrise 5:51 sunset 8:36 dark 9:46
moonset 12:49 a.m. moonrise 1:03 p.m.



feet

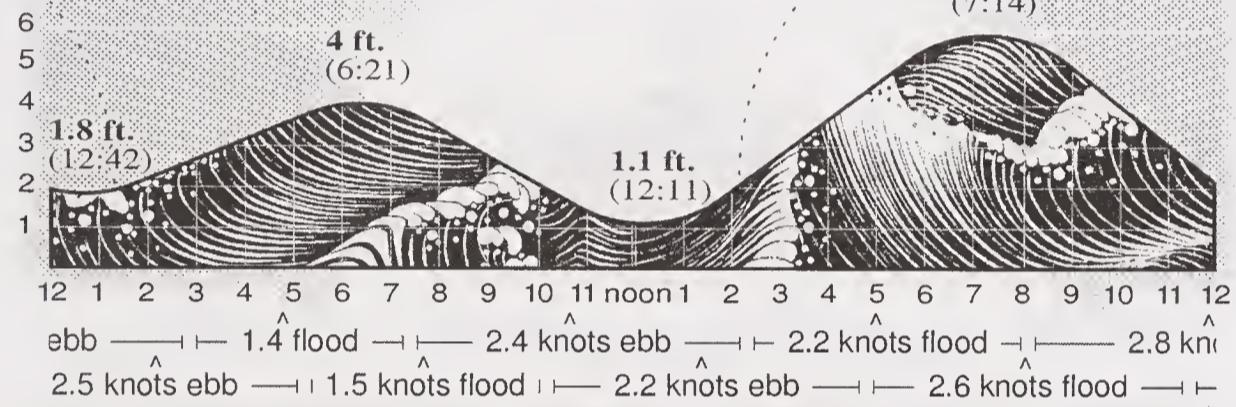


SAT JUL 1

dawn 4:42 sunrise 5:52 sunset 8:36 dark 9:46
moonset 1:20 a.m. moonrise 2:02 p.m.



feet

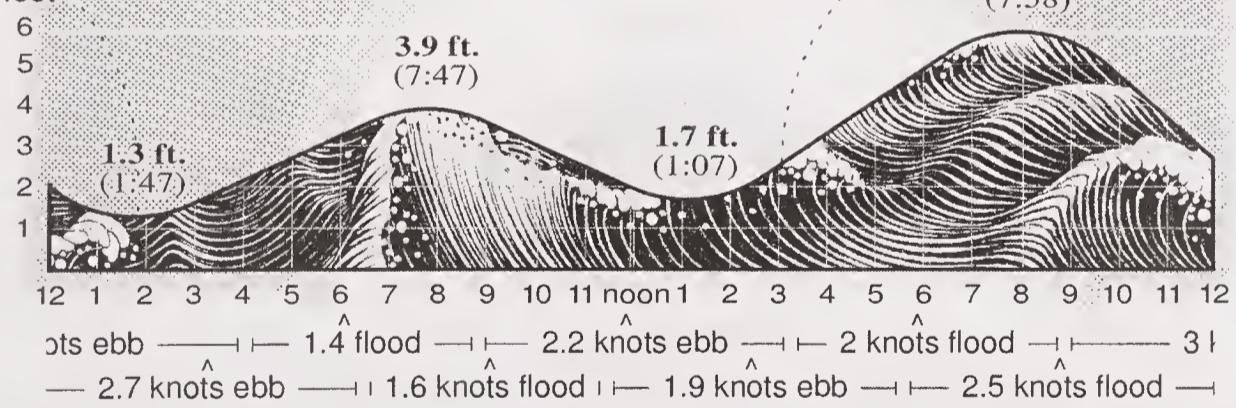


SUN JUL 2

dawn 4:42 sunrise 5:52 sunset 8:36 dark 9:46
moonset 1:51 a.m. moonrise 2:58 p.m.



feet



V

J

S

MON JUL 3

dawn 4:43 sunrise 5:53 sunset 8:35 dark 9:45
moonset 2:23 a.m. moonrise 3:54 p.m.

Earth at Aphelion

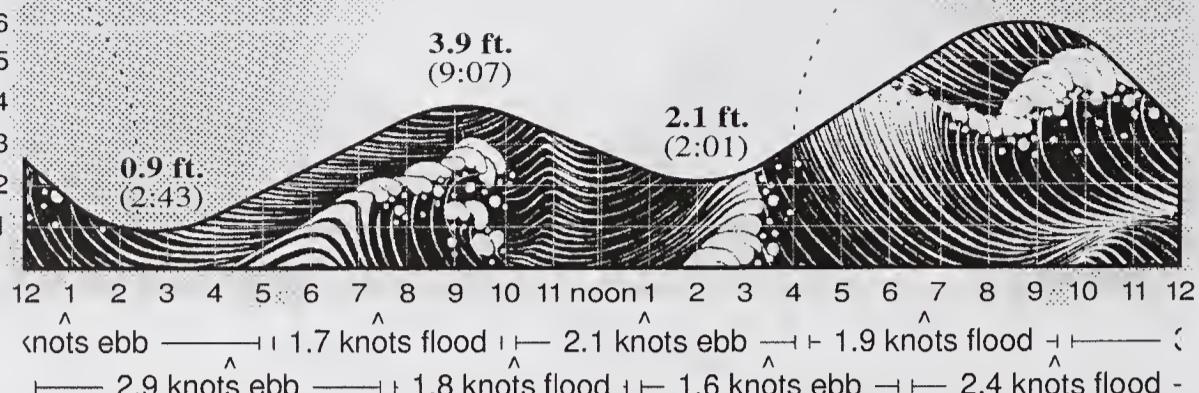


feet

3.9 ft.
(9:07)

2.1 ft.
(2:01)

5.9 ft.
(8:39)



TUE JUL 4

dawn 4:43 sunrise 5:53 sunset 8:35 dark 9:45
moonset 2:56 a.m. moonrise 4:49 p.m.

Independence Day

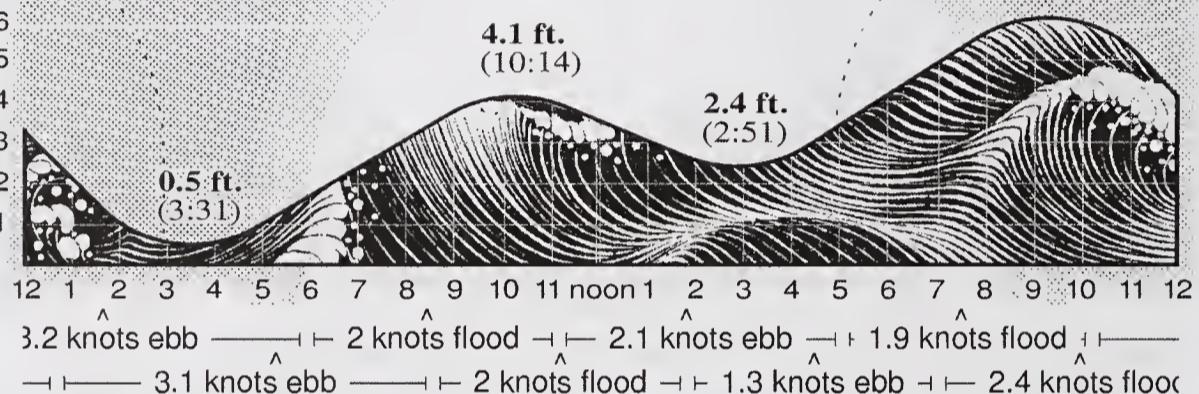


feet

4.1 ft.
(10:14)

2.4 ft.
(2:51)

6 ft.
(9:16)



WED JUL 5

dawn 4:44 sunrise 5:54 sunset 8:35 dark 9:45
moonset 3:31 a.m. moonrise 5:44 p.m.

apogee

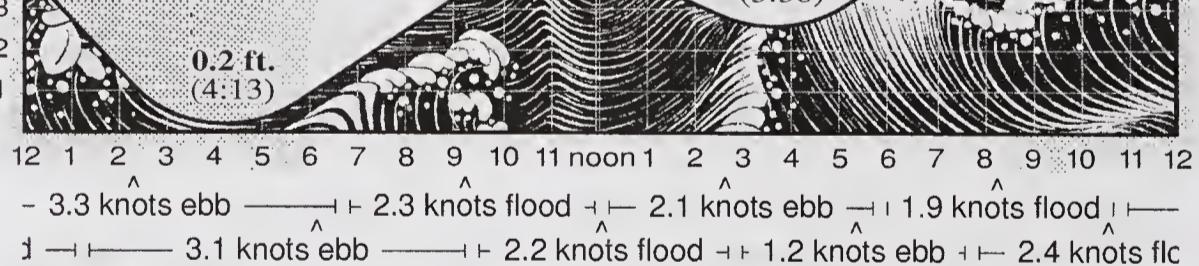


feet

4.3 ft.
(11:08)

2.6 ft.
(3:38)

6 ft.
(9:53)



THU JUL 6

dawn 4:45 sunrise 5:54 sunset 8:35 dark 9:44
moonset 4:10 a.m. moonrise 6:36 p.m.

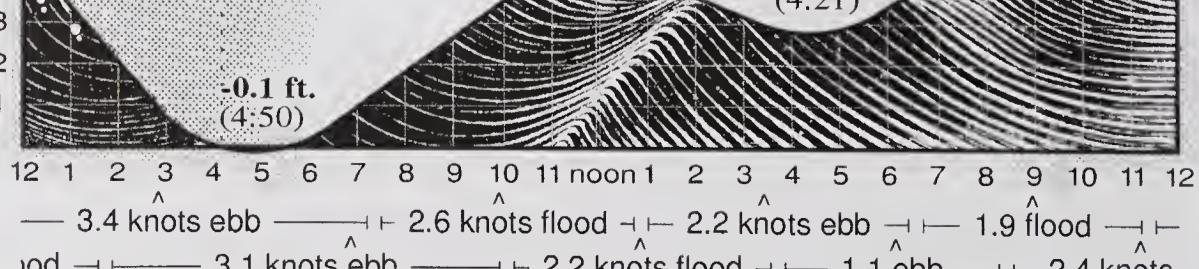


feet

4.4 ft.
(11:54)

2.8 ft.
(4:21)

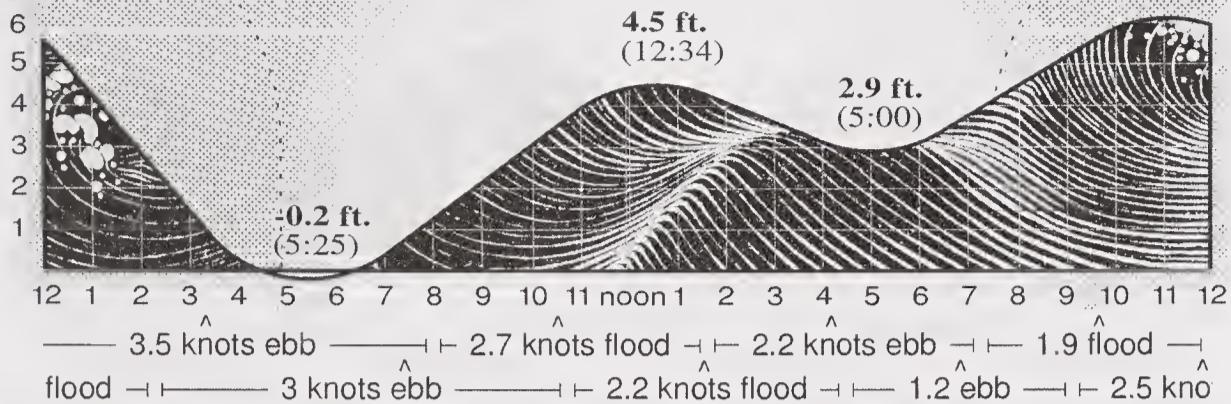
6.1 ft.
(10:28)



FRI JUL 7

dawn 4:45 sunrise 5:55 sunset 8:35 dark 9:44
moonset 4:52 a.m. moonrise 7:27 p.m.

feet

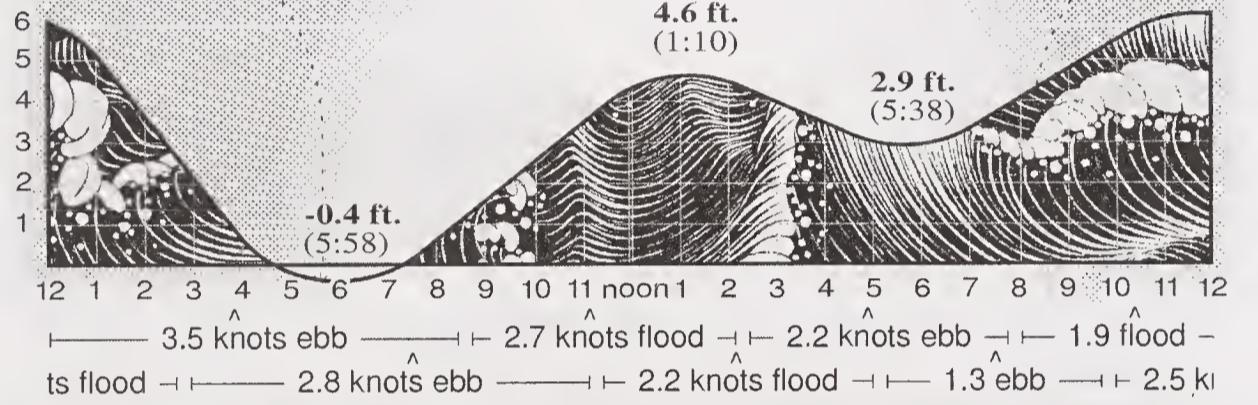


SAT JUL 8

dawn 4:46 sunrise 5:56 sunset 8:34 dark 9:43
moonset 5:39 a.m. moonrise 8:15 p.m.

Full Moon 9:07 p.m.

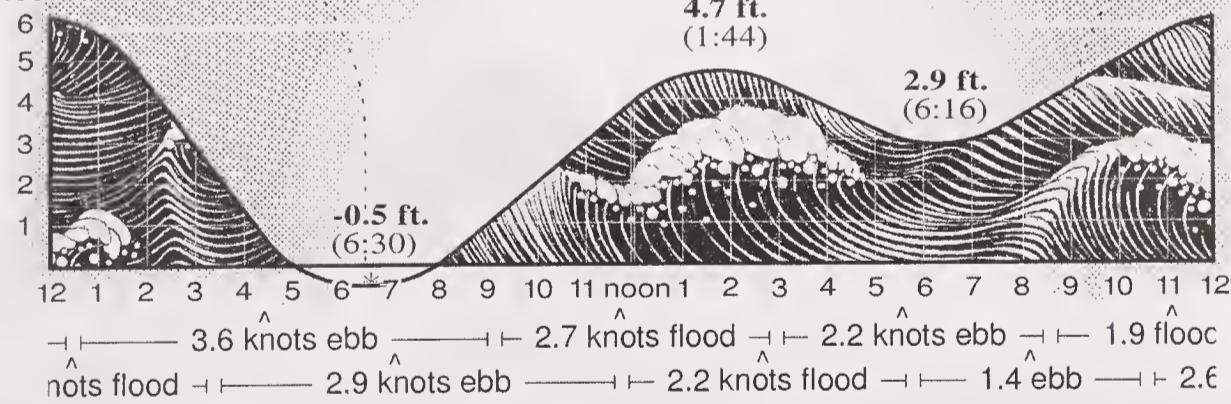
feet



SUN JUL 9

dawn 4:47 sunrise 5:56 sunset 8:34 dark 9:43
moonset 6:30 a.m. moonrise 9:00 p.m.

feet



V

m

I

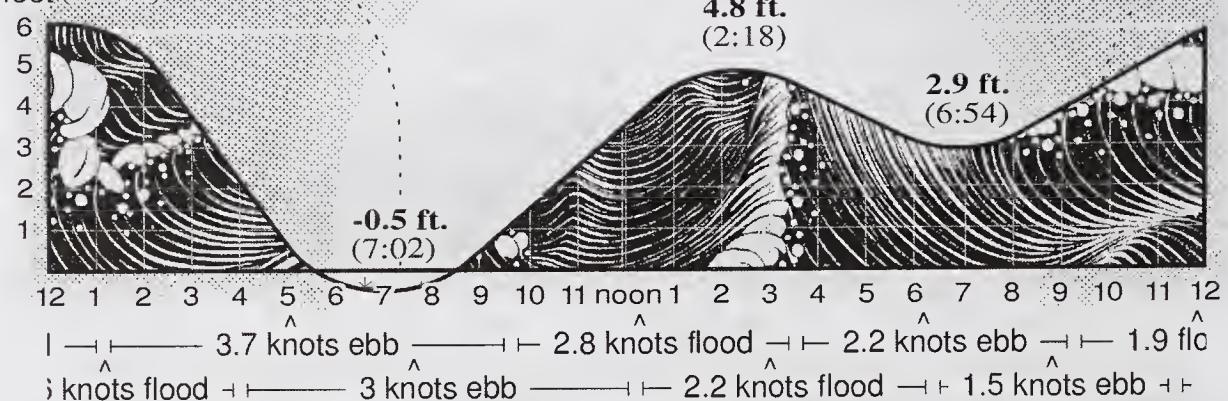
S

MON JUL 10 dawn 4:48 sunrise 5:57 sunset 8:34 dark 9:42

moonset 7:24 a.m. moonrise 9:41 p.m.



6 ft.
feet (12:16)



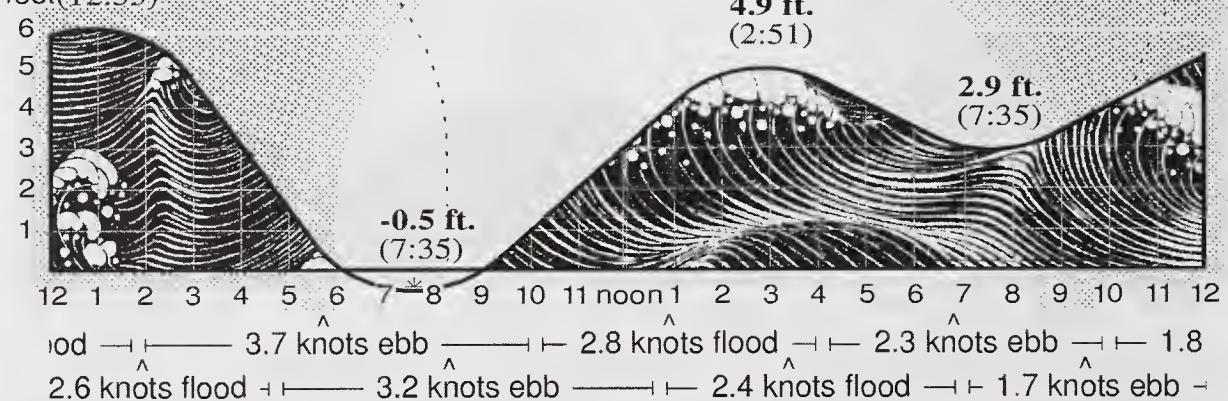
TUE JUL 11

dawn 4:49 sunrise 5:57 sunset 8:33 dark 9:42

moonset 8:20 a.m. moonrise 10:19 p.m.



5.9 ft.
feet (12:53)



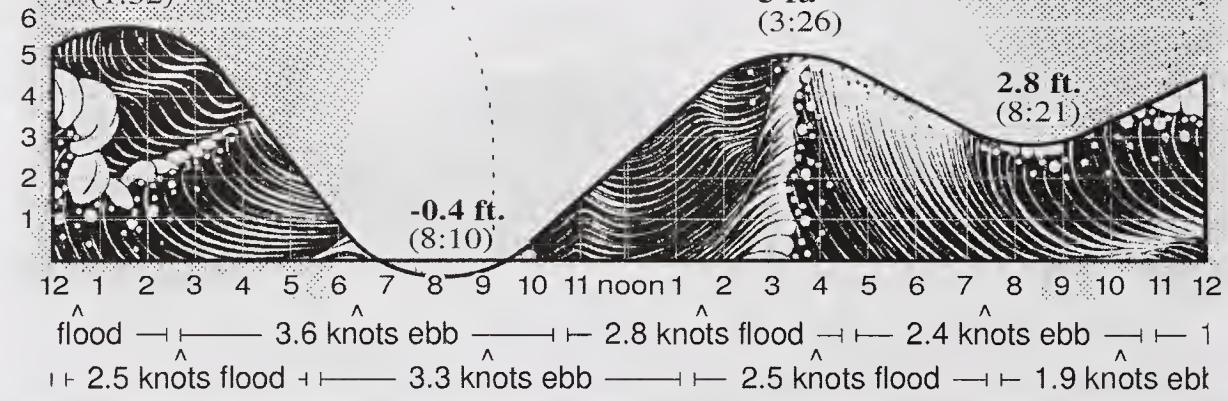
WED JUL 12

dawn 4:49 sunrise 5:58 sunset 8:33 dark 9:41

moonset 9:19 a.m. moonrise 10:54 p.m.



5.7 ft.
feet (1:32)



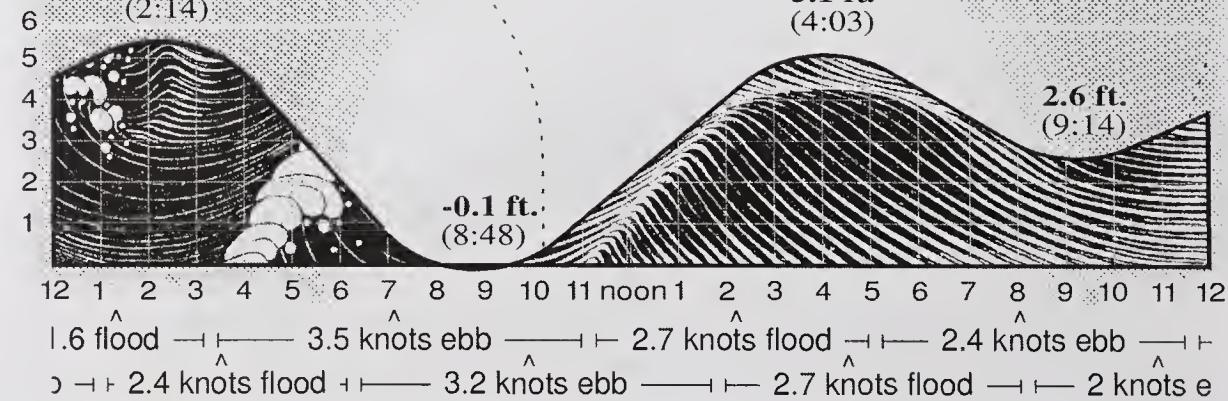
THU JUL 13

dawn 4:50 sunrise 5:59 sunset 8:32 dark 9:41

moonset 10:19 a.m. moonrise 11:28 p.m.

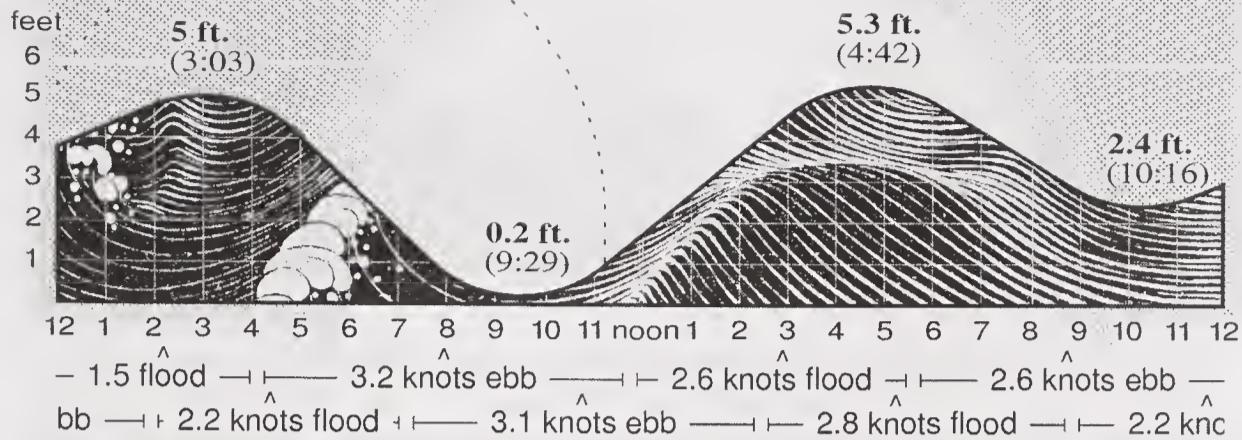


5.4 ft.
feet (2:14)



FRI JUL 14

dawn 4:51 sunrise 6:00 sunset 8:32 dark 9:40
moonset 11:20 a.m.

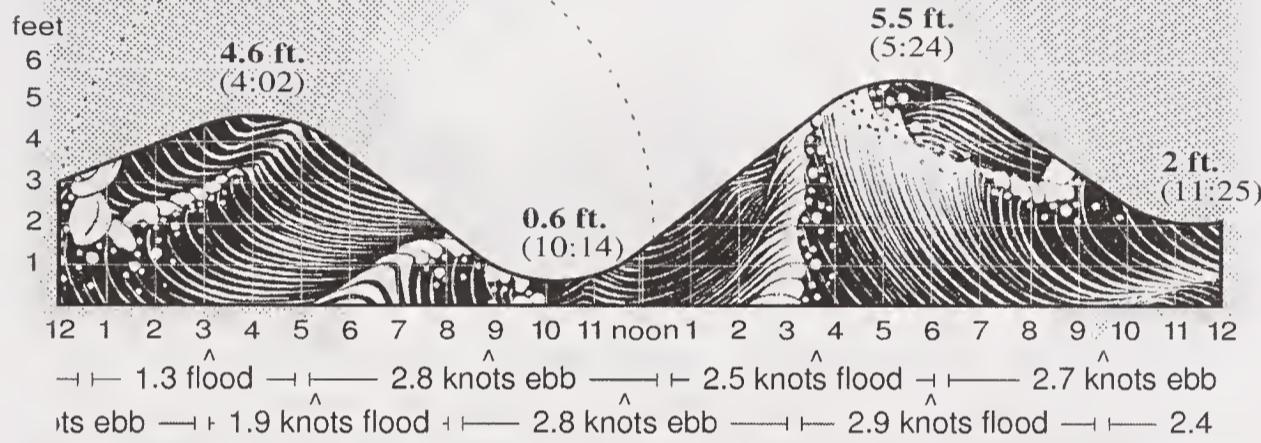


SAT JUL 15

dawn 4:52 sunrise 6:00 sunset 8:31 dark 9:39
moonrise 12:02 a.m. moonset 12:22 p.m.

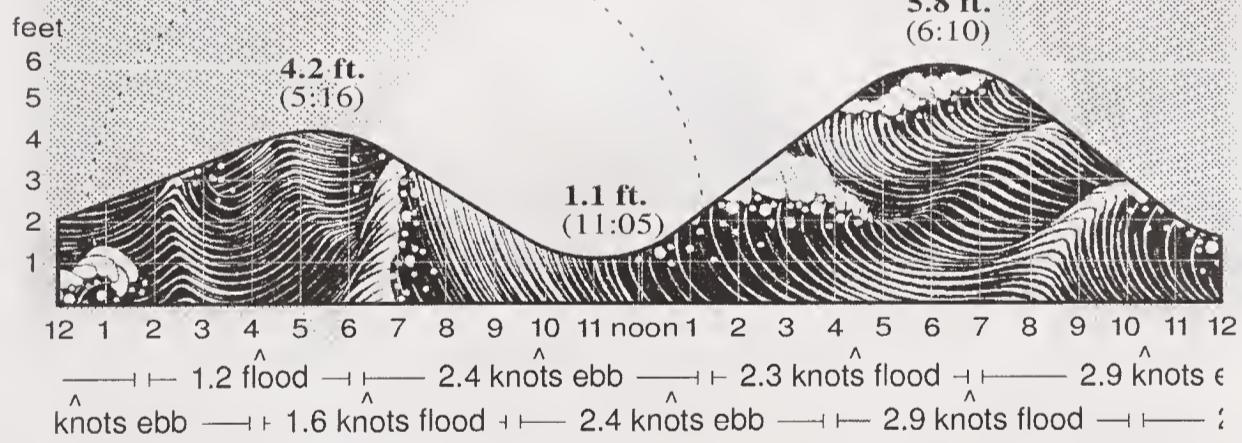


equator



SUN JUL 16

dawn 4:53 sunrise 6:01 sunset 8:31 dark 9:39
moonrise 12:36 a.m. moonset 1:26 p.m.



v

J

S

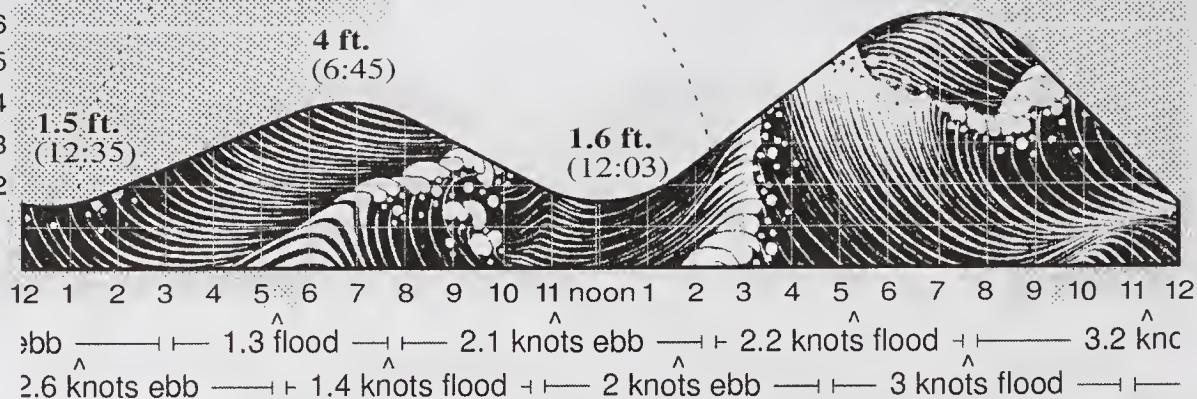
m

MON JUL 17

dawn 4:54 sunrise 6:02 sunset 8:30 dark 9:38
moonrise 1:11 a.m. moonset 2:32 p.m.



feet

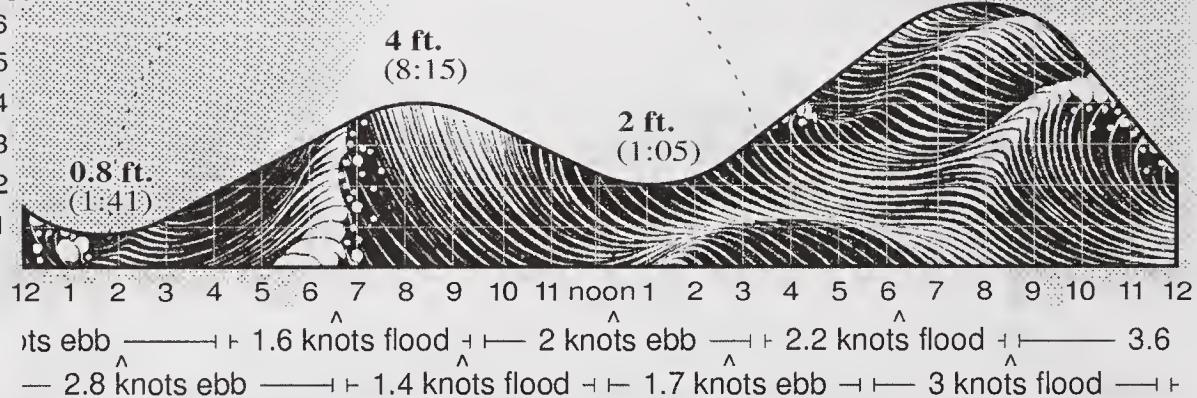


TUE JUL 18

dawn 4:55 sunrise 6:02 sunset 8:29 dark 9:37
moonrise 1:50 a.m. moonset 3:40 p.m.



feet

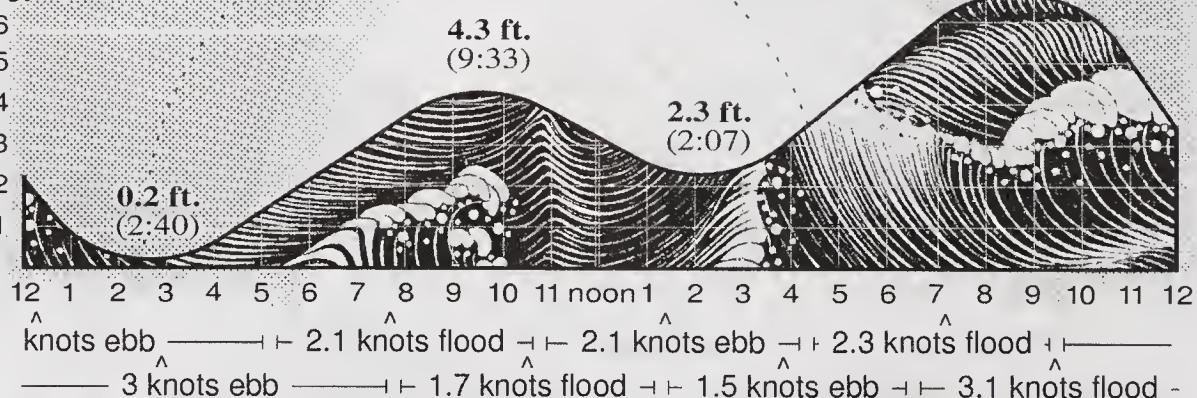


WED JUL 19

dawn 4:56 sunrise 6:03 sunset 8:29 dark 9:36
moonrise 2:33 a.m. moonset 4:49 p.m.



feet

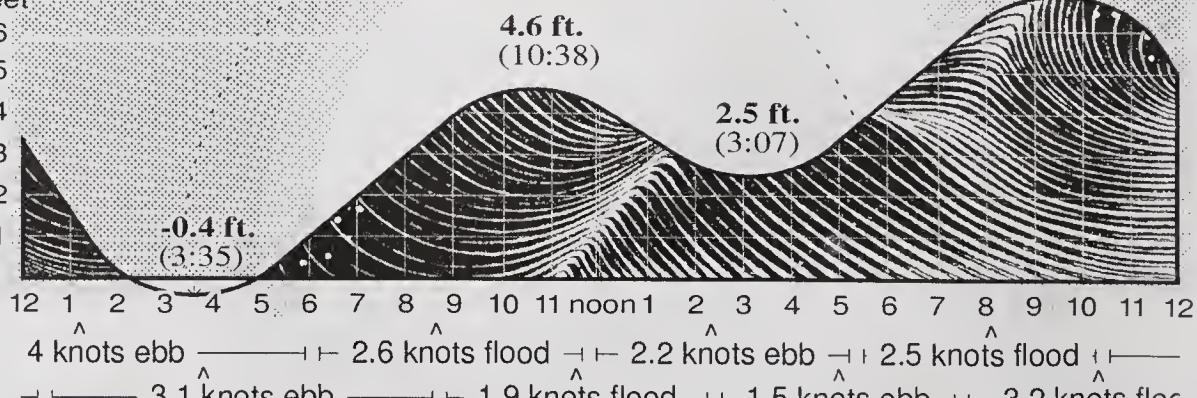


THU JUL 20

dawn 4:57 sunrise 6:04 sunset 8:28 dark 9:35
moonrise 3:23 a.m. moonset 5:56 p.m.



feet



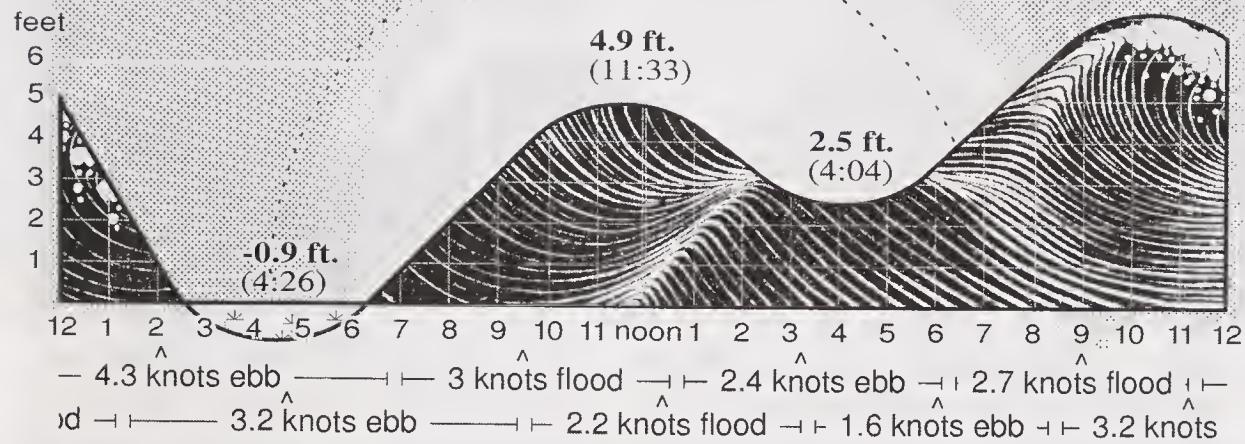
FRI JUL 21

dawn 4:58 sunrise 6:05 sunset 8:27 dark 9:34
moonrise 4:18 a.m. moonset 6:59 p.m.



perigee North

7.1 ft.
(10:24)

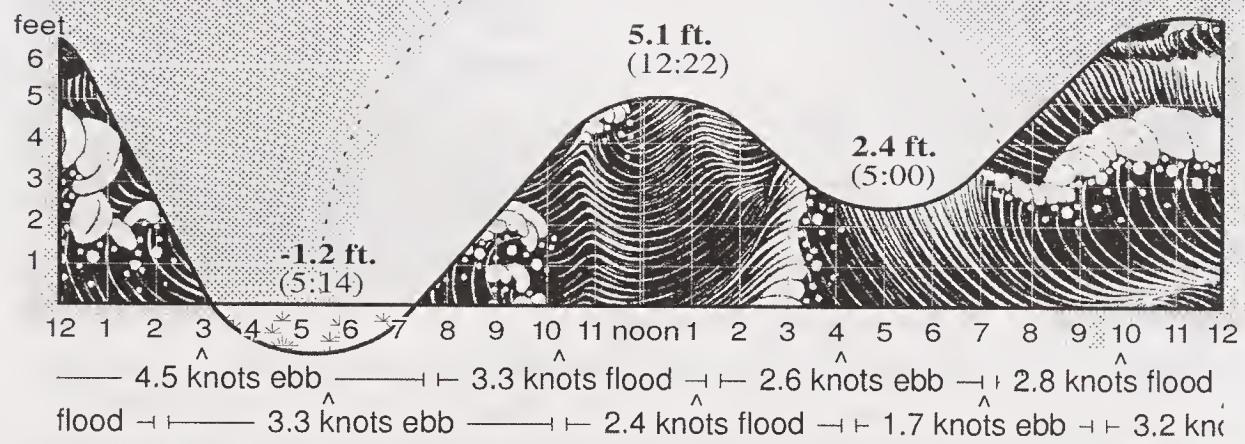


SAT JUL 22

dawn 4:59 sunrise 6:05 sunset 8:27 dark 9:33
moonrise 5:20 a.m. moonset 7:57 p.m.



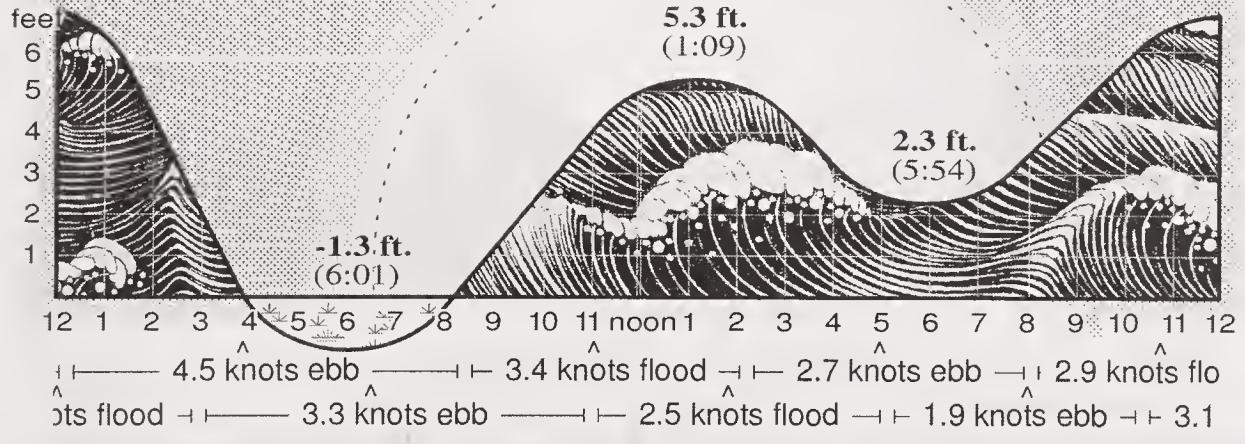
7.1 ft.
(11:15)



SUN JUL 23

dawn 5:00 sunrise 6:06 sunset 8:26 dark 9:32
moonrise 6:27 a.m. moonset 8:48 p.m.

New Moon 2:46 a.m.



V

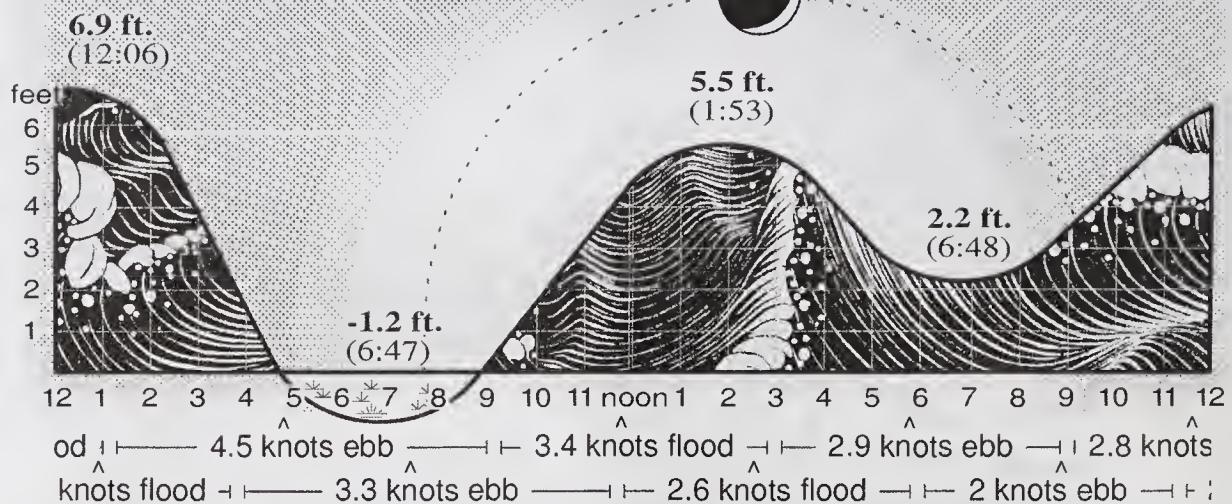
W

J

S

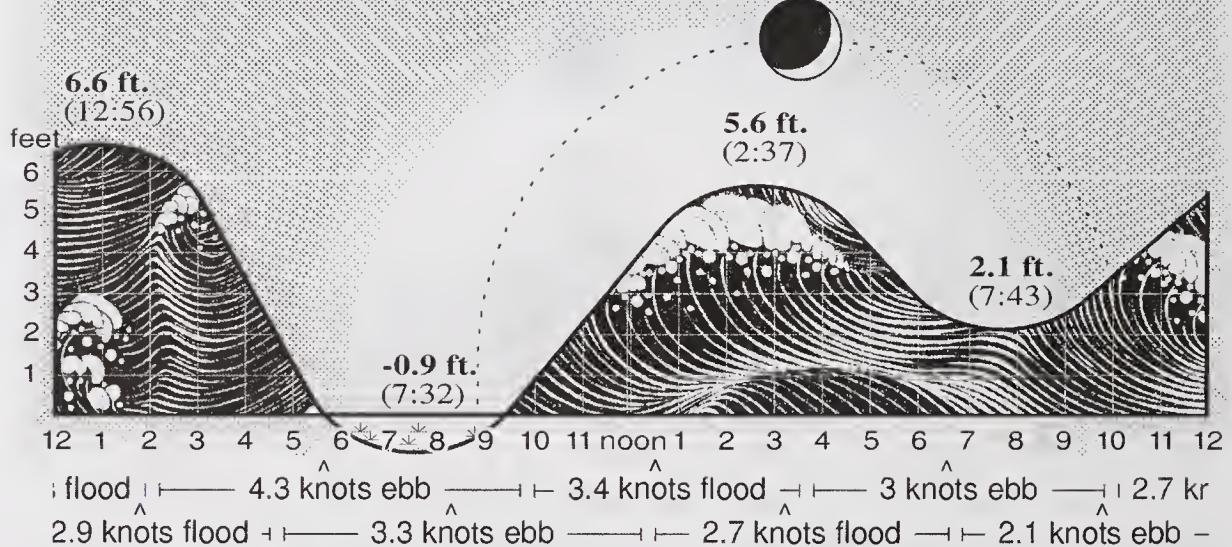
MON JUL 24

dawn 5:01 sunrise 6:07 sunset 8:25 dark 9:31
moonrise 7:35 a.m. moonset 9:32 p.m.



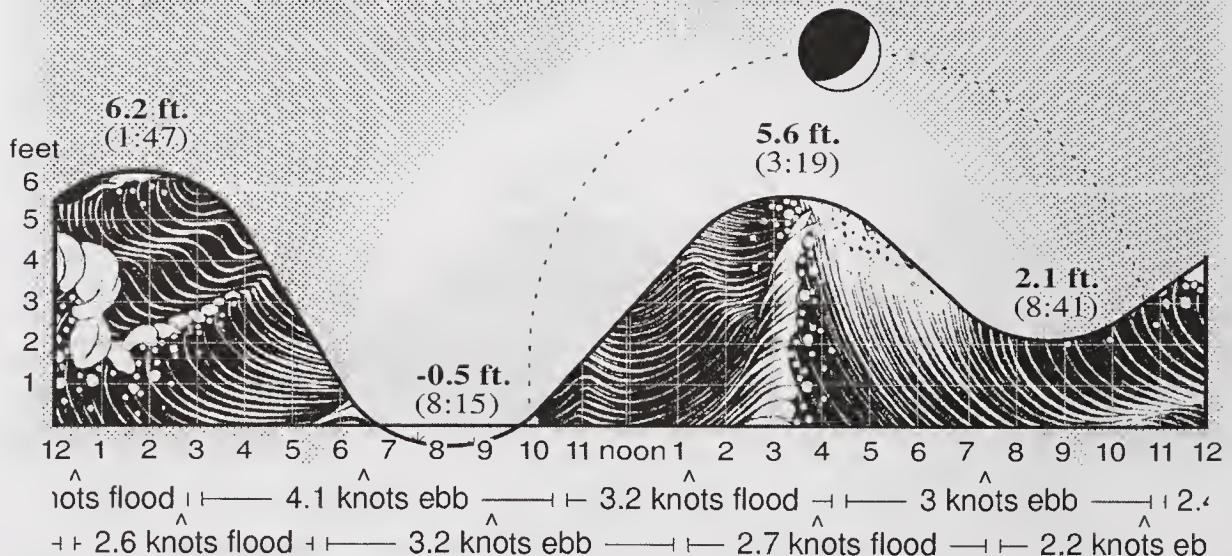
TUE JUL 25

dawn 5:02 sunrise 6:08 sunset 8:24 dark 9:30
moonrise 8:42 a.m. moonset 10:12 p.m.



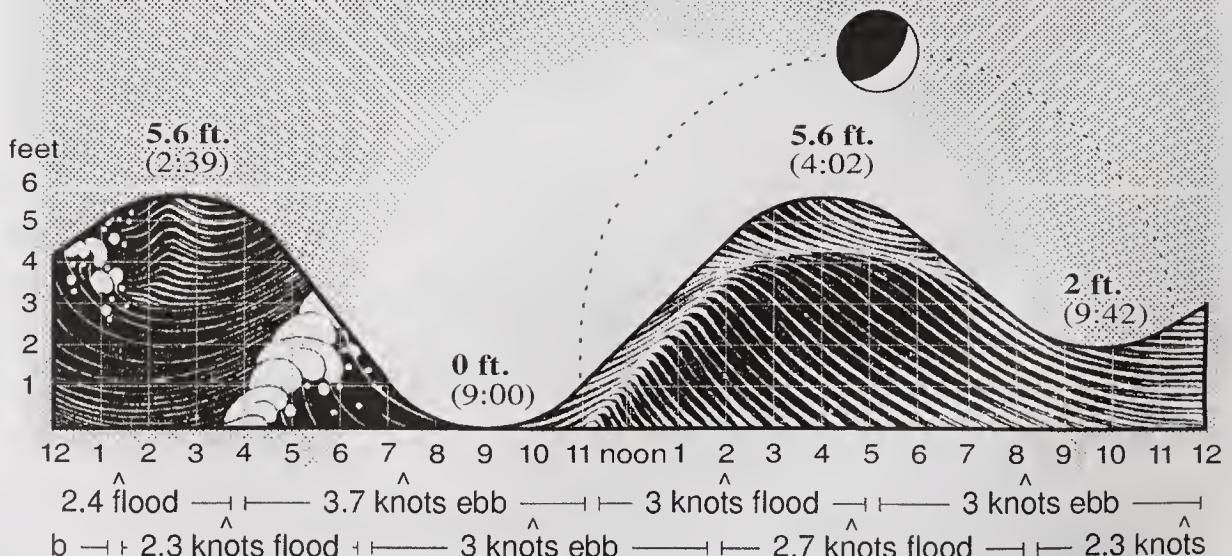
WED JUL 26

dawn 5:03 sunrise 6:09 sunset 8:24 dark 9:29
moonrise 9:47 a.m. moonset 10:47 p.m.



THU JUL 27

dawn 5:04 sunrise 6:10 sunset 8:23 dark 9:28
moonrise 10:50 a.m. moonset 11:20 p.m.



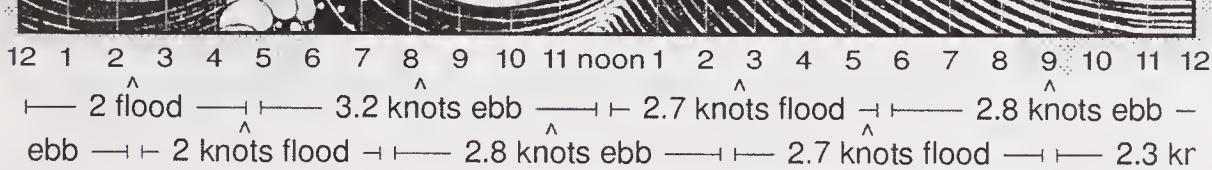
FRI JUL 28dawn 5:05 sunrise 6:10 sunset 8:22 dark 9:27
moonrise 11:50 a.m. moonset 11:52 p.m.

Delta Aquarids Meteor Peak

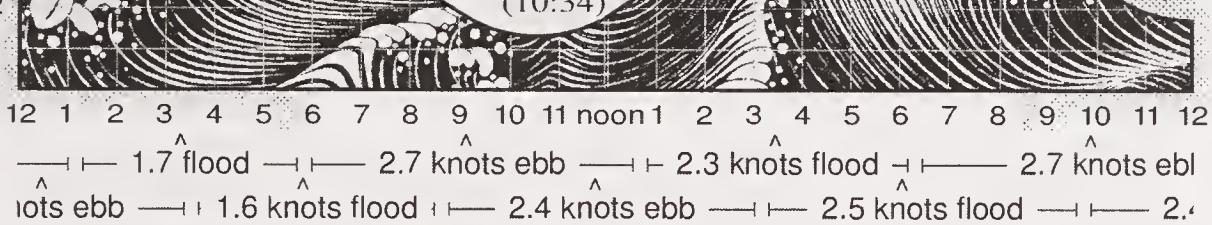


equator

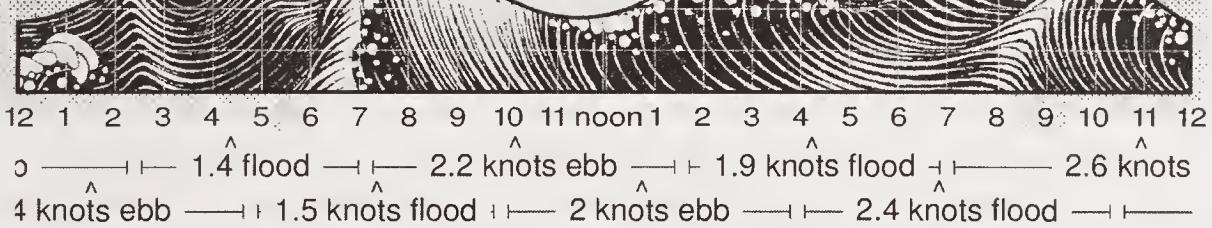
feet

5 ft.
(3:35)5.6 ft.
(4:46)1.9 ft.
(10:48)0.6 ft.
(9:45)**SAT JUL 29**dawn 5:06 sunrise 6:11 sunset 8:21 dark 9:26
moonrise 12:49 p.m.

feet

4.5 ft.
(4:39)5.6 ft.
(5:31)1.7 ft.
(11:57)1.3 ft.
(10:34)**SUN JUL 30**dawn 5:07 sunrise 6:12 sunset 8:20 dark 9:25
moonset 12:24 a.m. moonrise 1:46 p.m.

feet

4 ft.
(5:56)5.6 ft.
(6:18)1.8 ft.
(11:28)

V

J

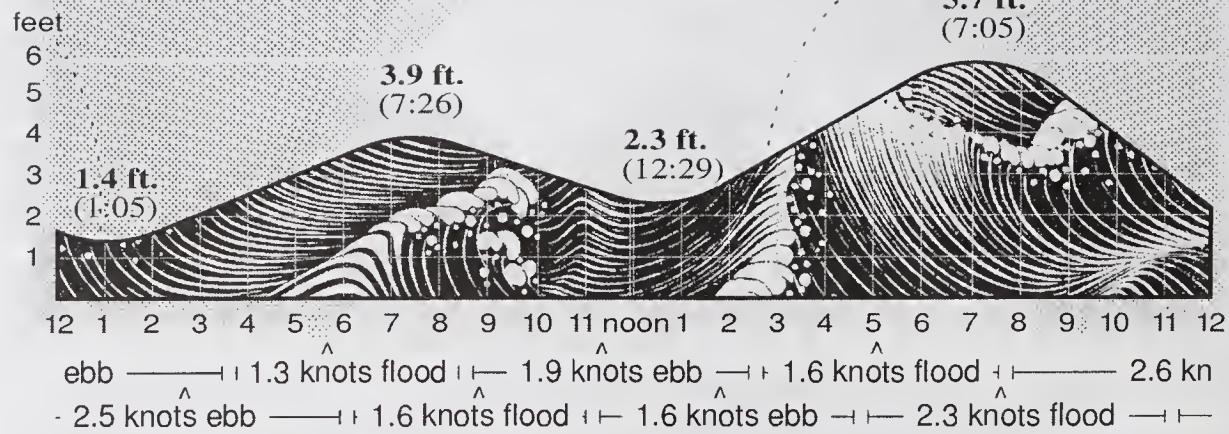
S

M

Delta Aquarids Meteor Shower The Delta Aquarids run annually from July 12th through August 23rd with this year's peak falling on the night of July 28th and 29th. The meteors appear to radiate from the constellation Aquarius that will be high in the eastern sky by midnight and with the setting of the waxing crescent moon, the sky should be dark and increase the visibility of the faint Delta Aquarids that can produce up to 20 meteors an hour.

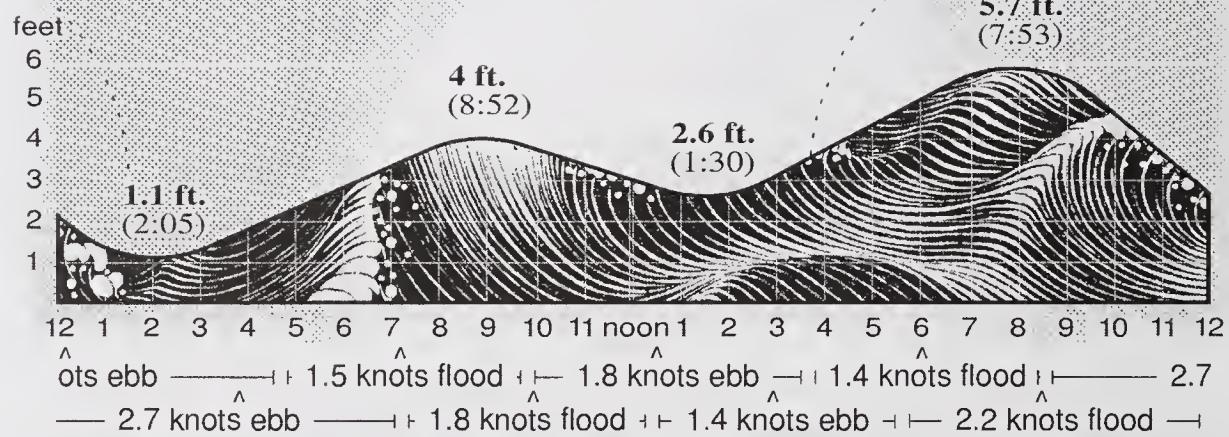
MON JUL 31

dawn 5:08 sunrise 6:13 sunset 8:19 dark 9:24
moonset 12:56 a.m. moonrise 2:42 p.m.



TUE AUG 1

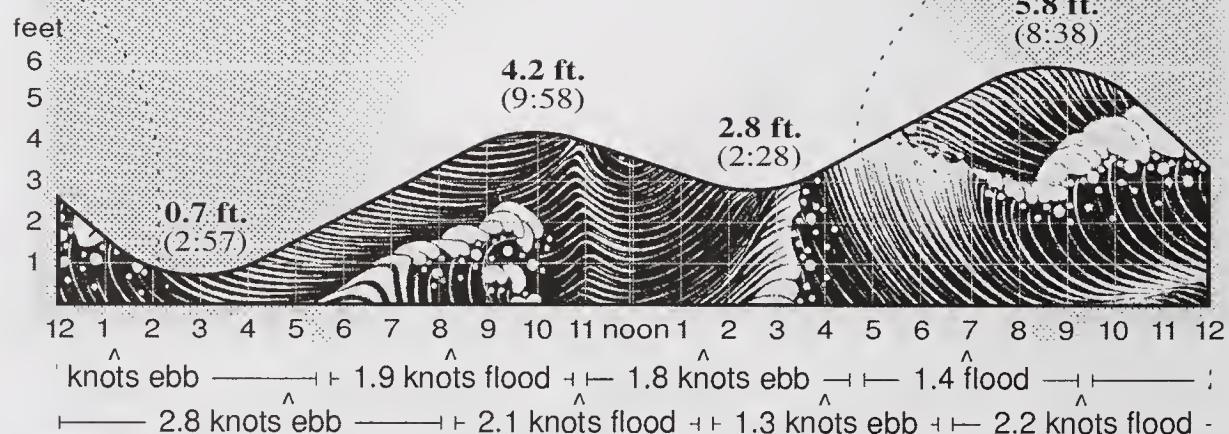
dawn 5:09 sunrise 6:14 sunset 8:18 dark 9:23
moonset 1:31 a.m. moonrise 3:36 p.m.



WED AUG 2

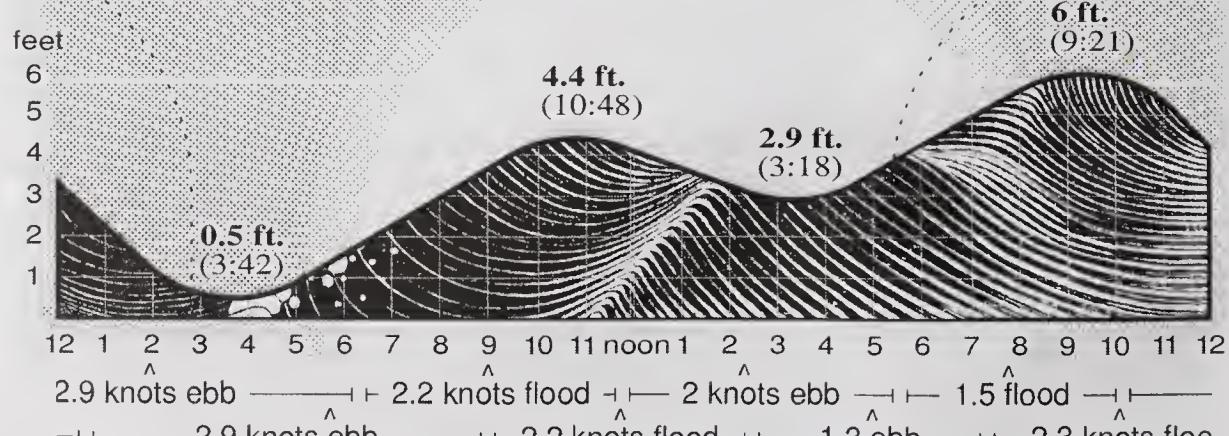
dawn 5:10 sunrise 6:15 sunset 8:17 dark 9:21
moonset 2:08 a.m. moonrise 4:30 p.m.

apogee



THU AUG 3

dawn 5:11 sunrise 6:15 sunset 8:16 dark 9:20
moonset 2:49 a.m. moonrise 5:21 p.m.

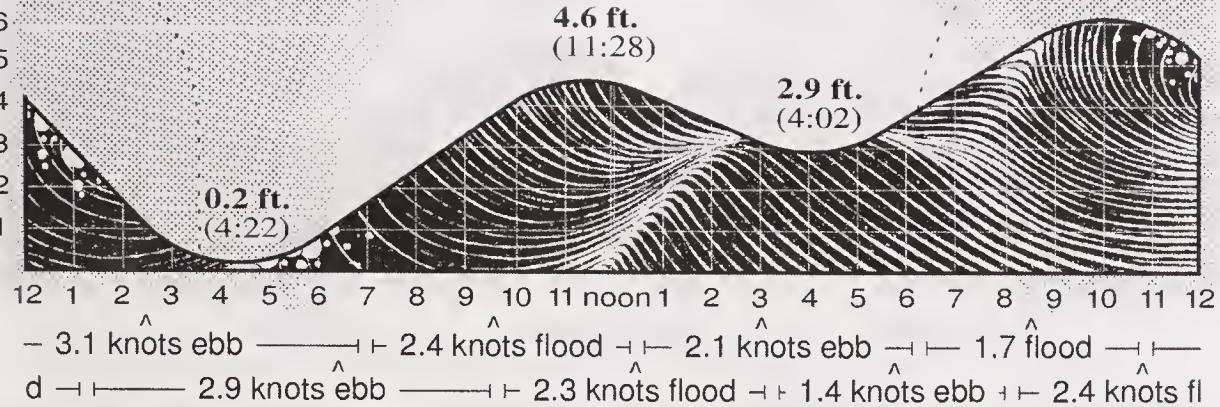


FRI AUG 4dawn 5:12 sunrise 6:16 sunset 8:15 dark 9:19
moonset 3:34 a.m. moonrise 6:10 p.m.

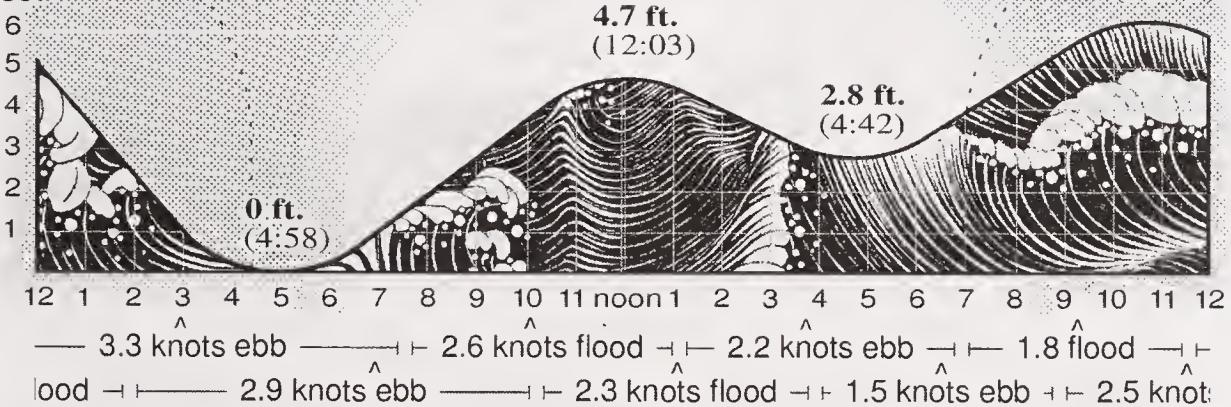
South



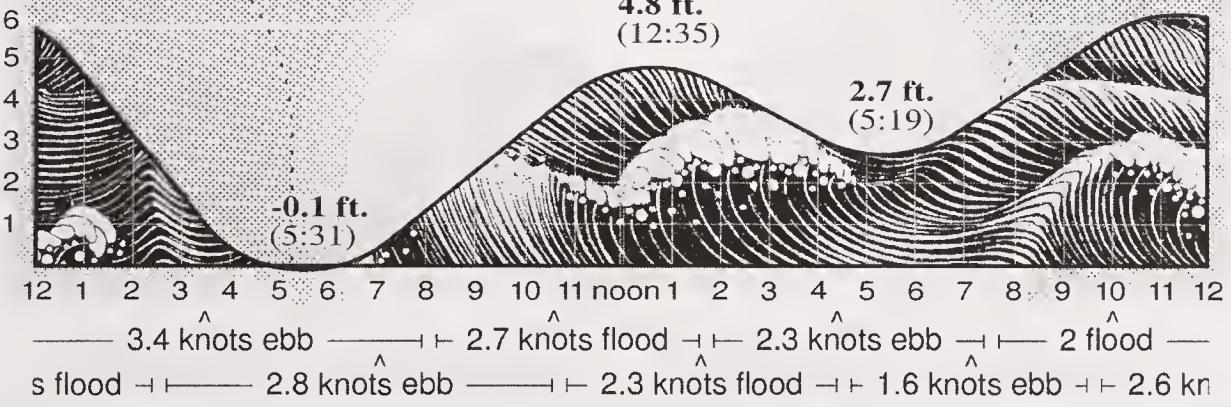
feet

**SAT AUG 5**dawn 5:13 sunrise 6:17 sunset 8:14 dark 9:18
moonset 4:24 a.m. moonrise 6:57 p.m.

feet

**SUN AUG 6**dawn 5:14 sunrise 6:18 sunset 8:13 dark 9:16
moonset 5:17 a.m. moonrise 7:39 p.m.

feet



V

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Partial Lunar Eclipse The August 7th partial lunar eclipse's path of totality will not be visible from the continental United States. This Lunar eclipse, however, is closely followed by a significant Solar Eclipse that will streak across the United States in a once in a lifetime event. This Solar Eclipse takes place on August 21st. If you are in the path of totality, the Sun will be obscured for approximately 2 minutes. If outside the path, a partial Solar eclipse will be visible throughout the United States.

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MON AUG 7

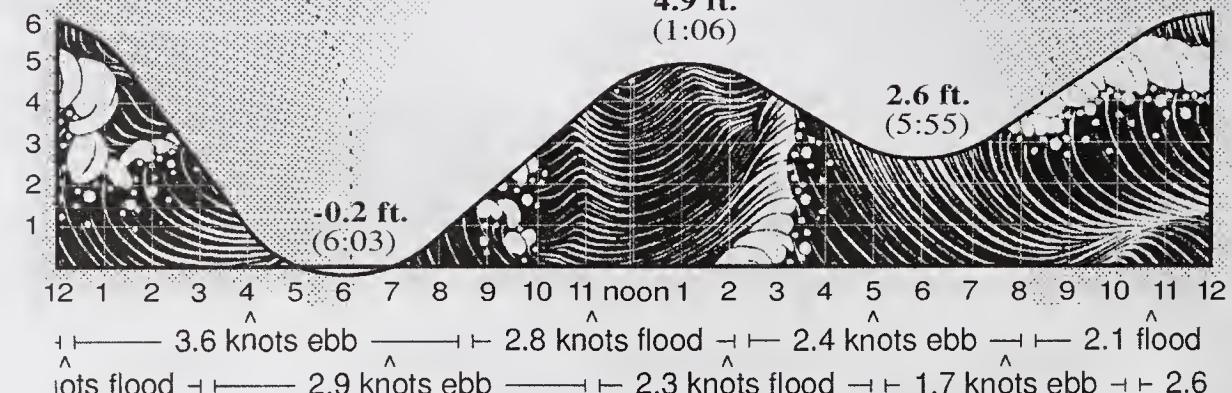


Full Moon 11:11 a.m.

dawn 5:15 sunrise 6:19 sunset 8:12 dark 9:15
moonset 6:13 a.m. moonrise 8:19 p.m.

Partial Lunar Eclipse

feet

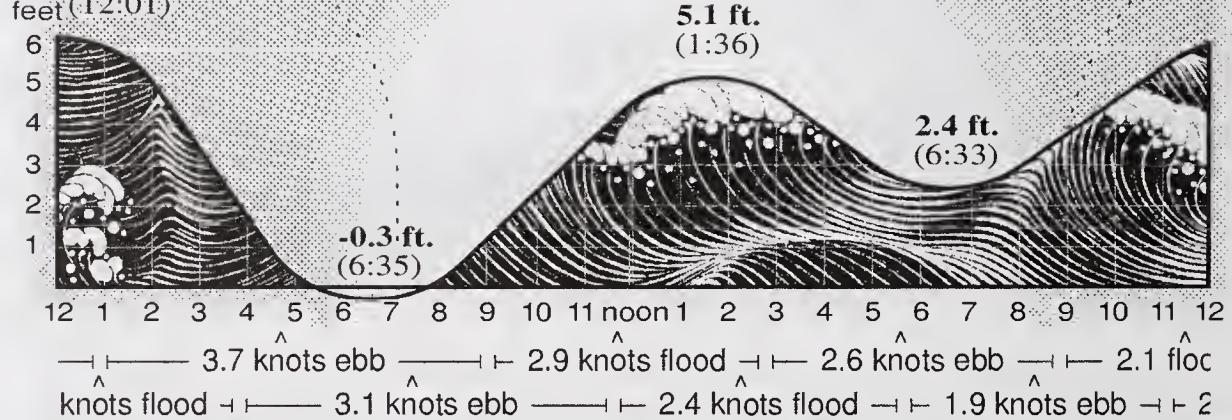


TUE AUG 8



dawn 5:17 sunrise 6:20 sunset 8:11 dark 9:14
moonset 7:12 a.m. moonrise 8:56 p.m.

feet (12:01)

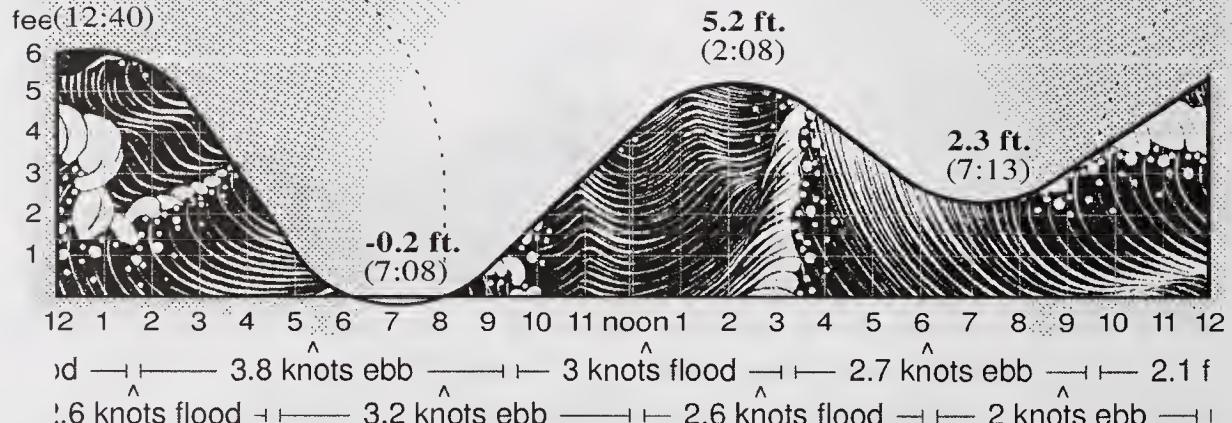


WED AUG 9



dawn 5:18 sunrise 6:21 sunset 8:09 dark 9:12
moonset 8:12 a.m. moonrise 9:31 p.m.

feet (12:40)

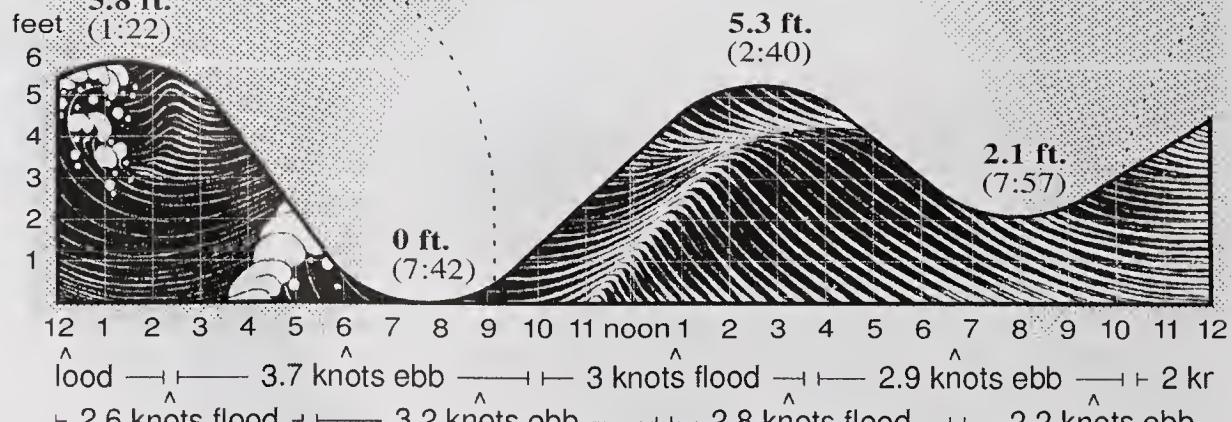


THU AUG 10



dawn 5:19 sunrise 6:21 sunset 8:08 dark 9:11
moonset 9:13 a.m. moonrise 10:04 p.m.

feet (1:22)

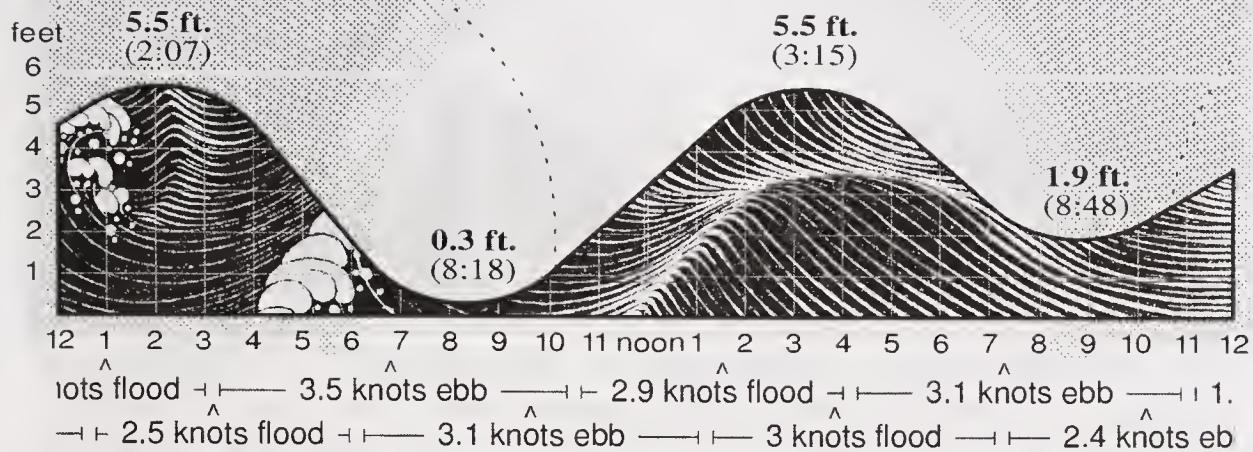


FRI AUG 11

dawn 5:20 sunrise 6:22 sunset 8:07 dark 9:09
moonset 10:16 a.m. moonrise 10:38 p.m.

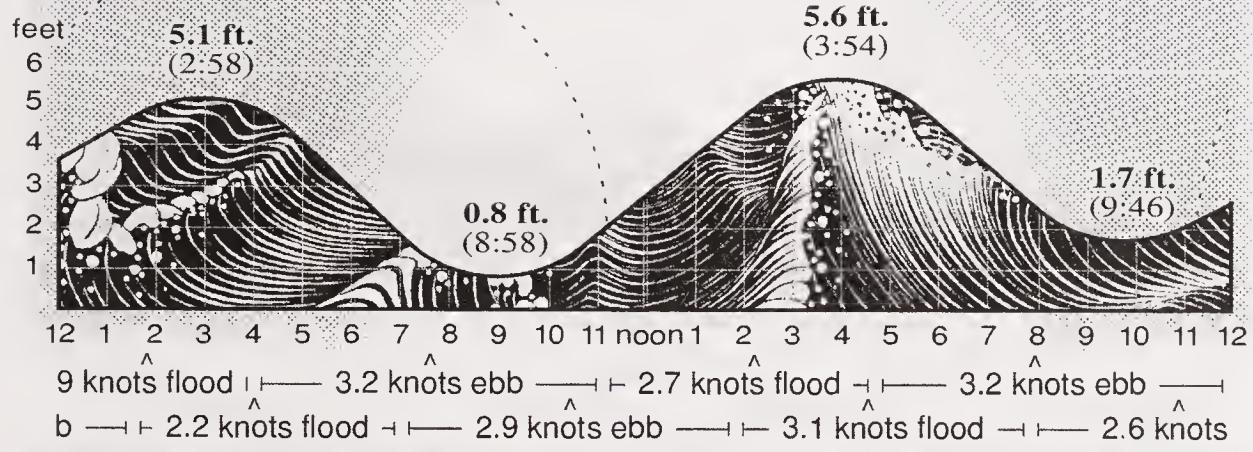


equator



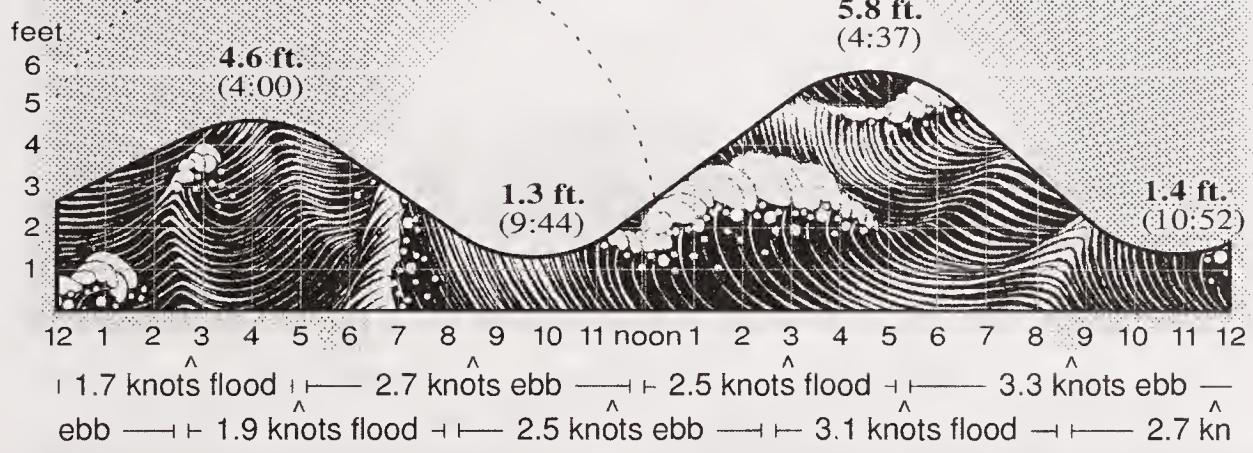
SAT AUG 12

dawn 5:21 sunrise 6:23 sunset 8:06 dark 9:08
moonset 11:19 a.m. moonrise 11:13 p.m.



SUN AUG 13

dawn 5:22 sunrise 6:24 sunset 8:05 dark 9:07
moonset 12:24 p.m. moonrise 11:50 p.m.



V

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Perseids Meteor Shower The Perseids run annually from July 17th to August 24th. This year's peak is the night and morning of August 12th and 13th. The Perseids produce bright and flaring meteors with fine trains and a zenithal hourly rate of about 80. The waning gibbous moon will compete with the Perseids, but their numbers and brightness may still provide a rewarding display. The Perseids radiate from their namesake constellation Perseus, a hero in Greek Mythology. To locate Perseus look for Cassiopeia, the Queen, with its distinctive "wide spread" W or M shape high overhead. Perseus is the constellation to Cassiopeia's east and follows her across the night sky.

MON AUG 14

dawn 5:23 sunrise 6:25 sunset 8:03 dark 9:05
moonset 1:30 p.m.

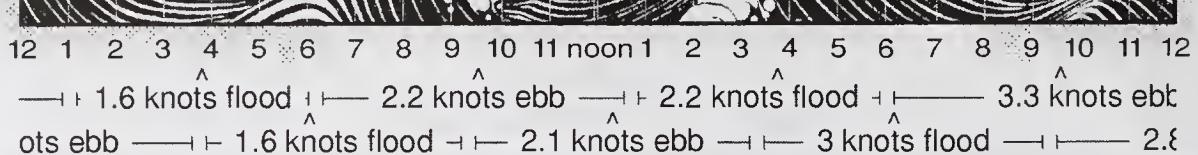


feet

4.3 ft.
(5:17)

6 ft.
(5:27)

1.8 ft.
(10:37)



TUE AUG 15

dawn 5:24 sunrise 6:26 sunset 8:02 dark 9:04
moonrise 12:31 a.m. moonset 2:36 p.m.

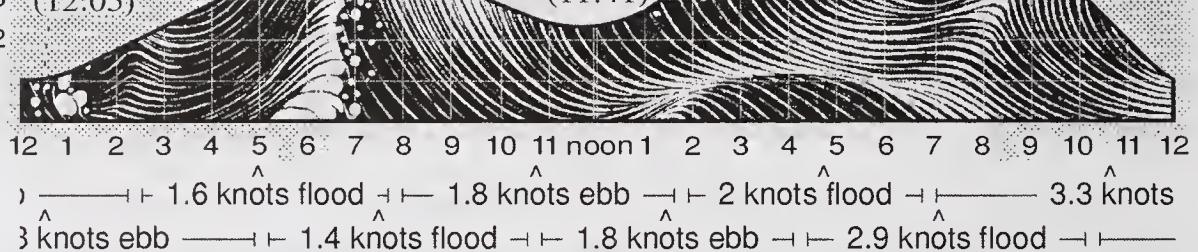


feet

4.1 ft.
(6:48)

6.1 ft.
(6:23)

2.3 ft.
(11:41)



WED AUG 16

dawn 5:25 sunrise 6:27 sunset 8:01 dark 9:02
moonrise 1:16 a.m. moonset 3:42 p.m.



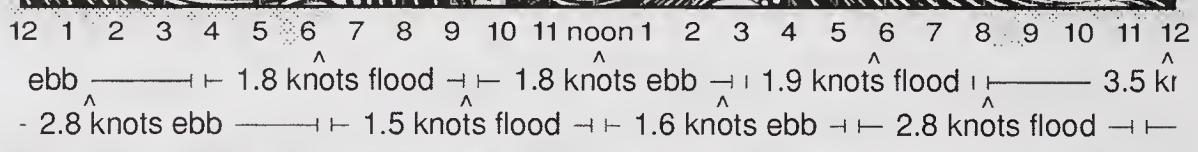
feet

0.6 ft.
(1:17)

6.3 ft.
(7:23)

4.2 ft.
(8:17)

2.6 ft.
(12:52)



THU AUG 17

dawn 5:26 sunrise 6:27 sunset 8:00 dark 9:01
moonrise 2:08 a.m. moonset 4:45 p.m.



North

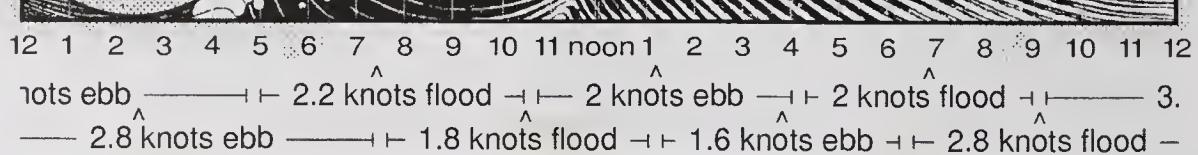
feet

0.1 ft.
(2:22)

6.5 ft.
(8:23)

4.5 ft.
(9:29)

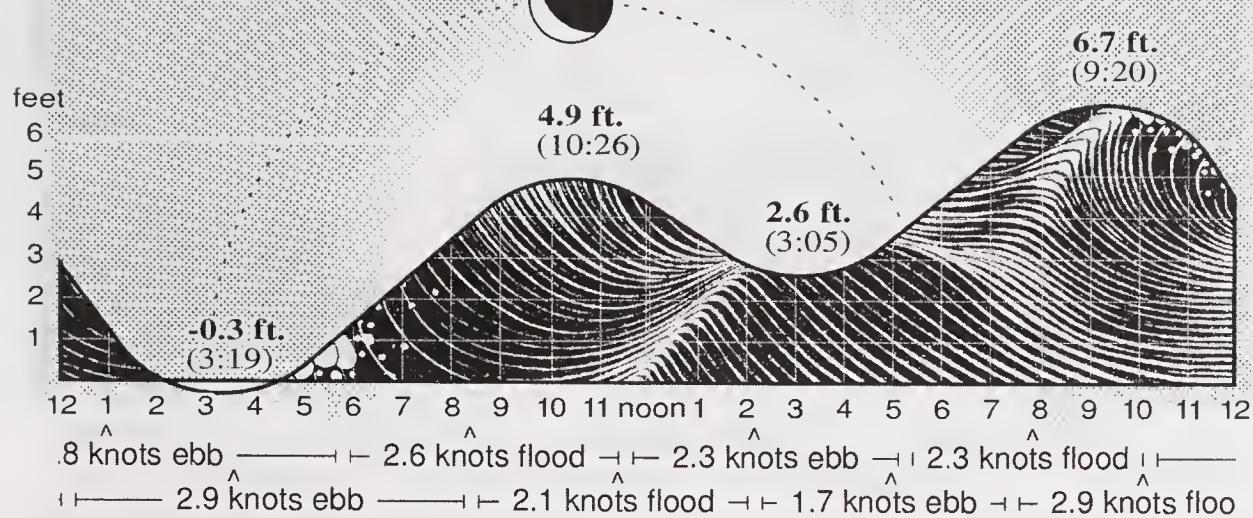
2.7 ft.
(2:02)



FRI AUG 18

dawn 5:27 sunrise 6:28 sunset 7:58 dark 8:59
moonrise 3:05 a.m. moonset 5:44 p.m.

perigee

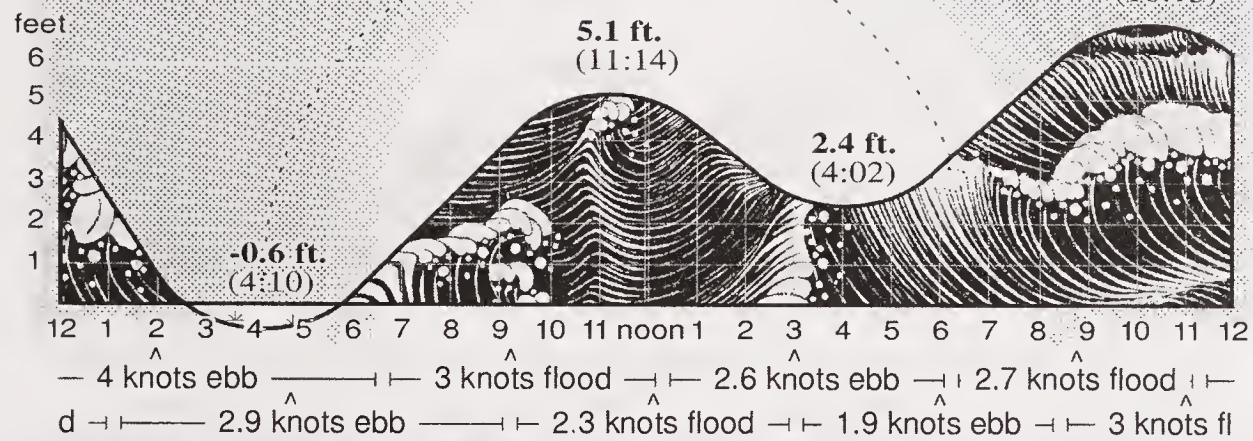


SAT AUG 19

dawn 5:28 sunrise 6:29 sunset 7:57 dark 8:58
moonrise 4:08 a.m. moonset 6:37 p.m.



6.8 ft.
(10:15)

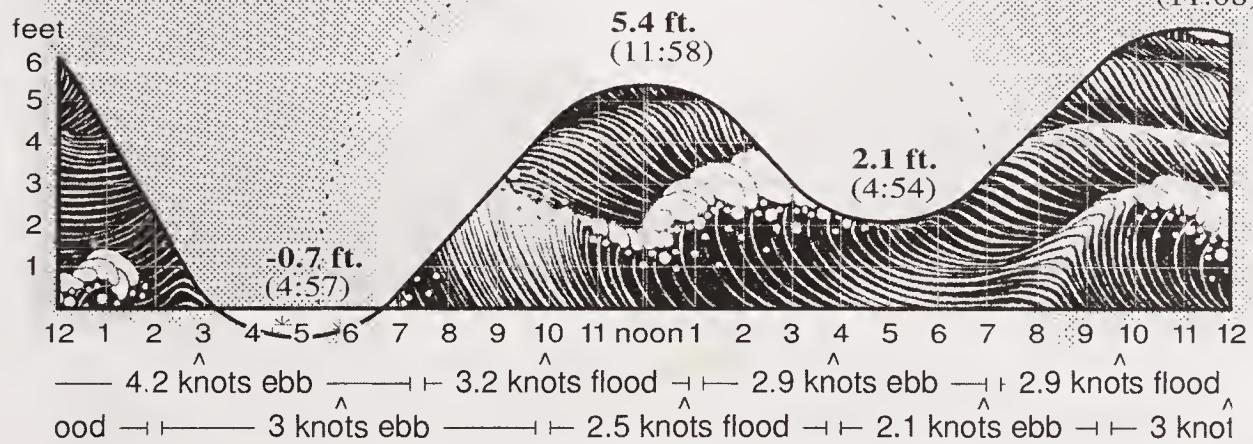


SUN AUG 20

dawn 5:29 sunrise 6:30 sunset 7:56 dark 8:56
moonrise 5:14 a.m. moonset 7:24 p.m.



6.8 ft.
(11:08)

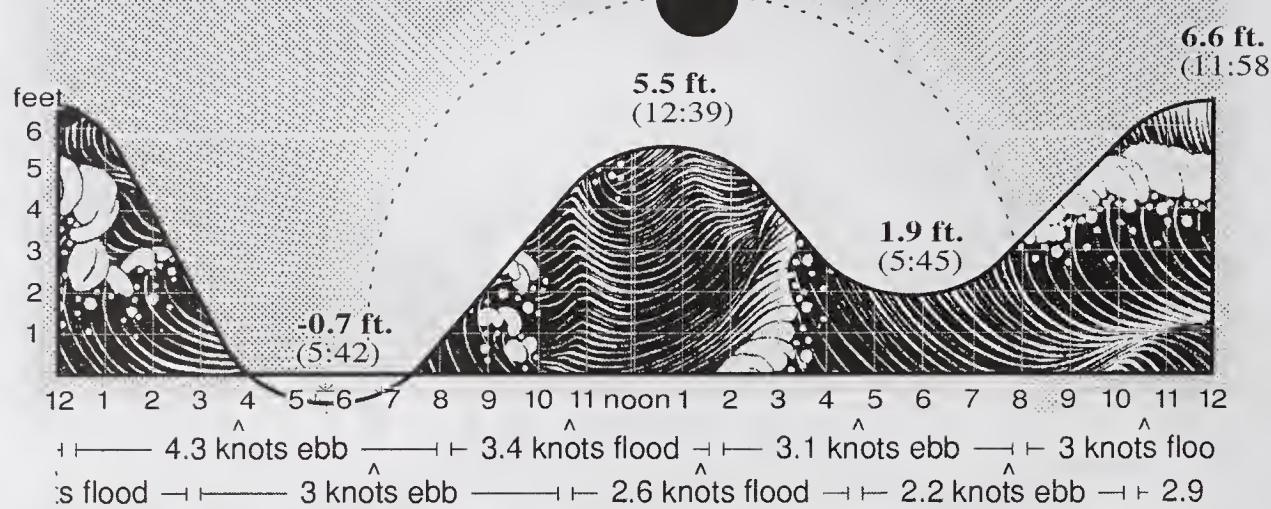


MON AUG 21

Total Solar Eclipse

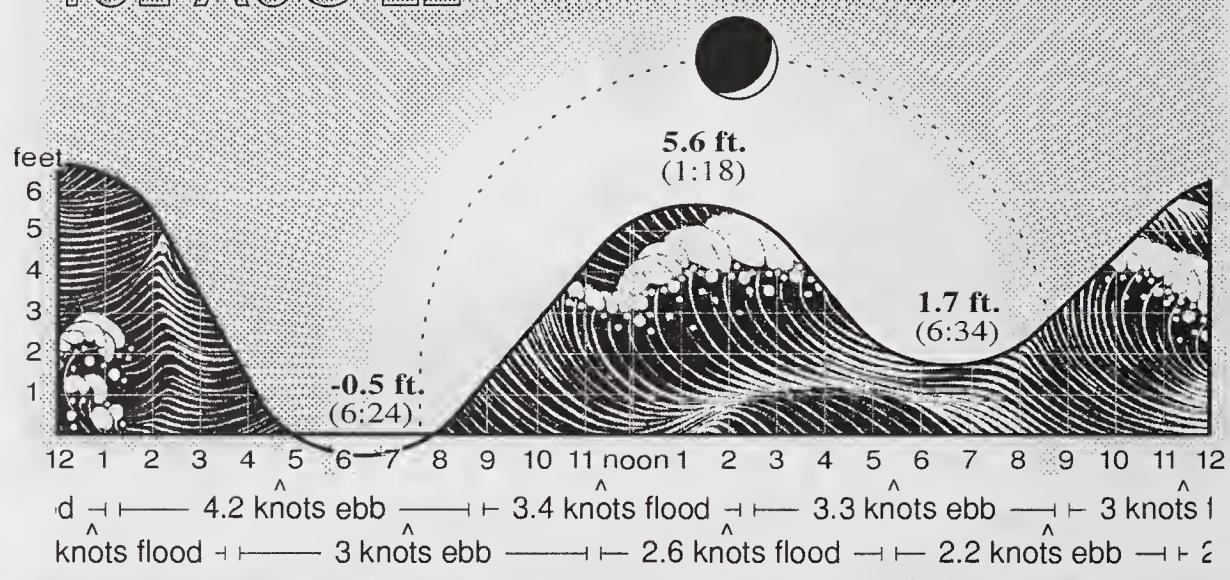
dawn 5:30 sunrise 6:31 sunset 7:54 dark 8:55
moonrise 6:21 a.m. moonset 8:05 p.m.

New Moon 11:30 a.m.



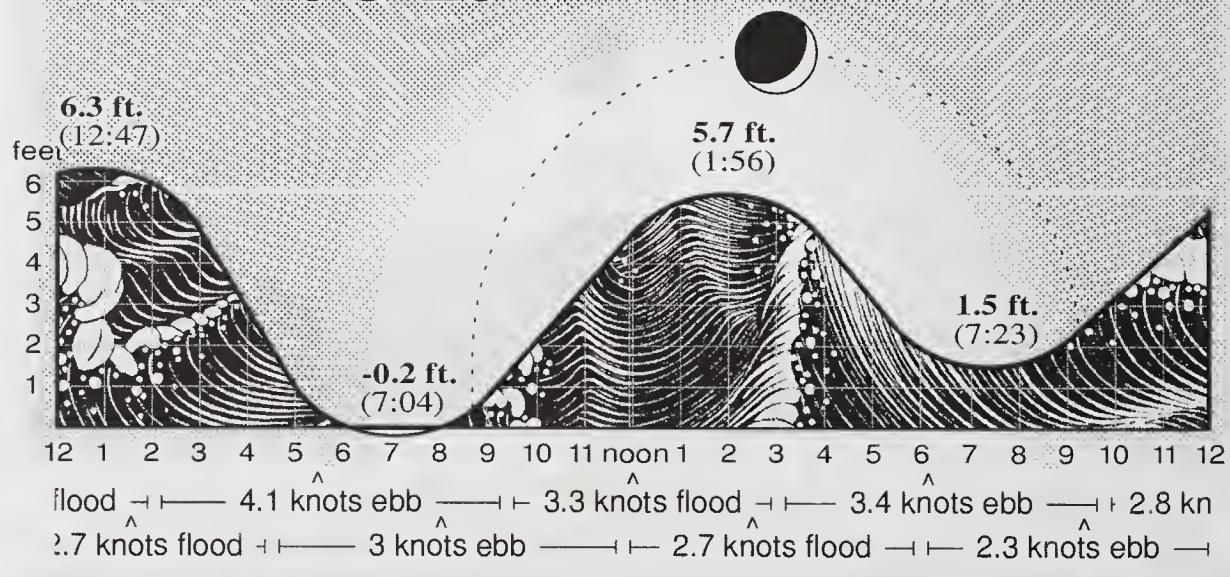
TUE AUG 22

dawn 5:31 sunrise 6:32 sunset 7:53 dark 8:53
moonrise 7:28 a.m. moonset 8:43 p.m.



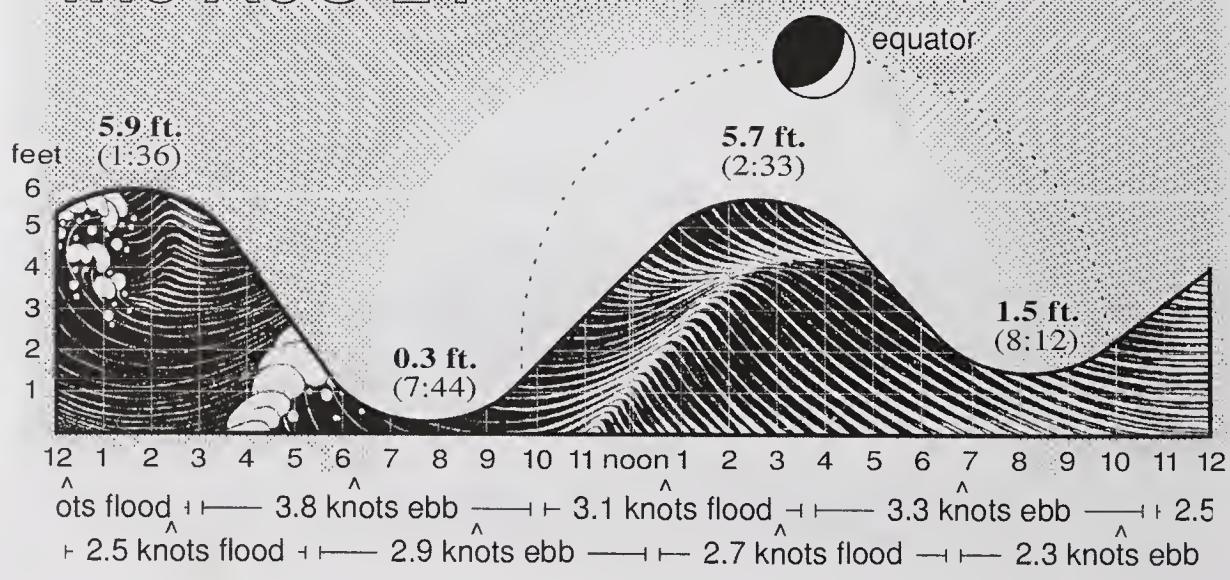
WED AUG 23

dawn 5:32 sunrise 6:33 sunset 7:52 dark 8:52
moonrise 8:32 a.m. moonset 9:17 p.m.



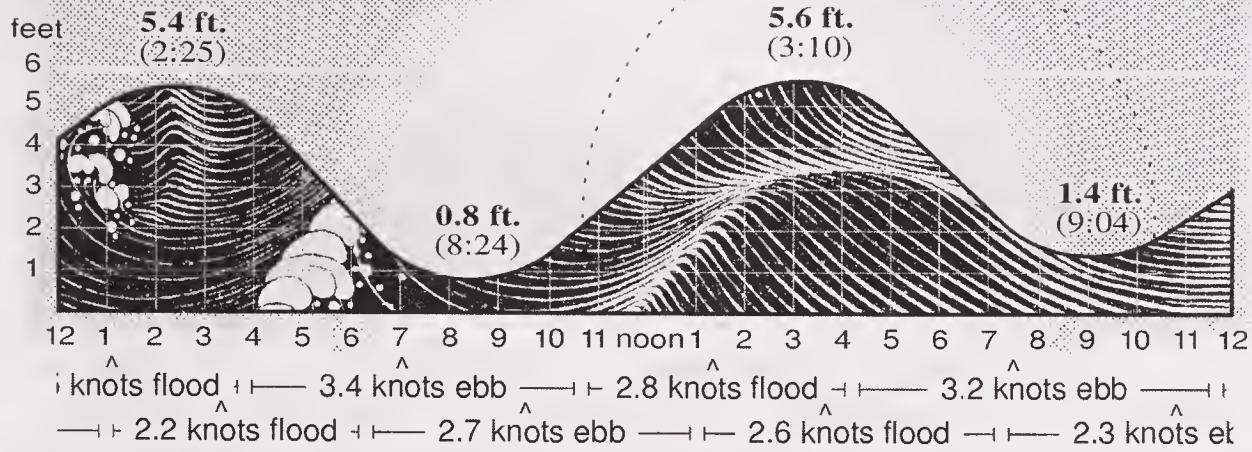
THU AUG 24

dawn 5:33 sunrise 6:33 sunset 7:50 dark 8:50
moonrise 9:35 a.m. moonset 9:50 p.m.



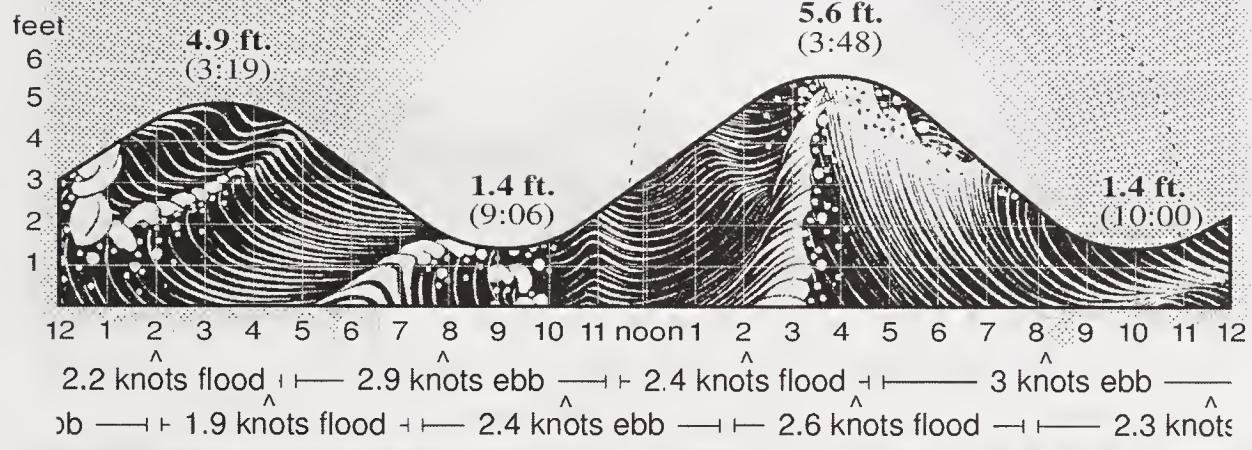
FRI AUG 25

dawn 5:34 sunrise 6:34 sunset 7:49 dark 8:48
moonrise 10:35 a.m. moonset 10:22 p.m.



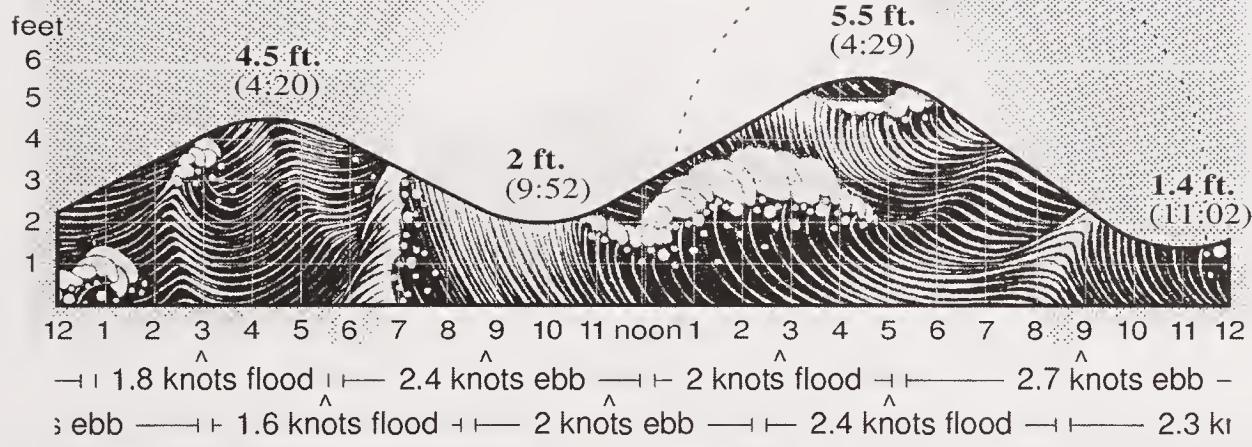
SAT AUG 26

dawn 5:35 sunrise 6:35 sunset 7:47 dark 8:47
moonrise 11:34 a.m. moonset 10:55 p.m.



SUN AUG 27

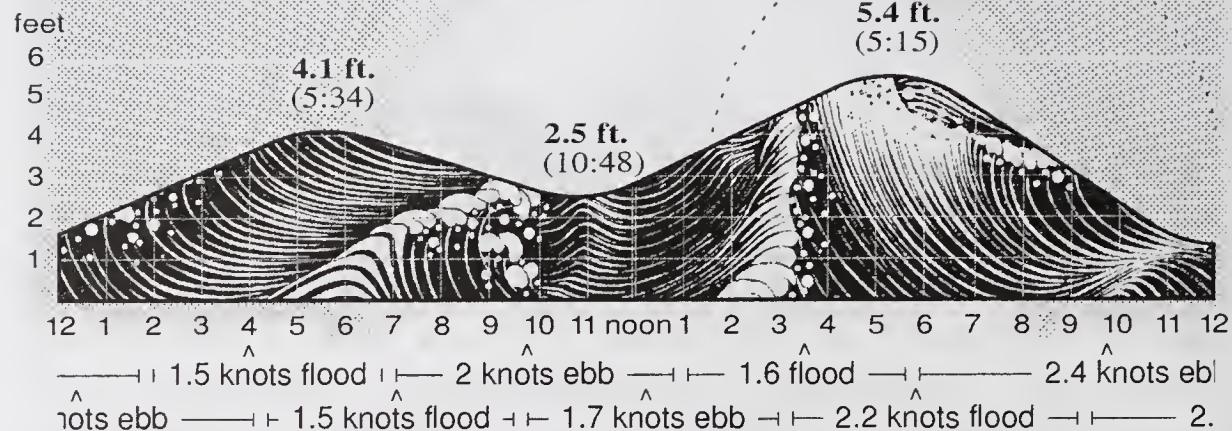
dawn 5:36 sunrise 6:36 sunset 7:46 dark 8:45
moonrise 12:31 p.m. moonset 11:29 p.m.



Total Solar Eclipse The August 21st total solar eclipse will be visible throughout the continental United States as at least a partial solar eclipse. The Eclipse's path of totality - the relatively narrow band where you will be able to see the moon totally eclipsing the Sun - will be visible beginning in the Pacific Ocean and coming ashore in northern Oregon, then running across Idaho, Wyoming, Nebraska, Missouri, Kentucky, Tennessee, North and South Carolina. The duration of totality at any location will be approximately 2 minutes in length. To safely view any solar eclipse requires eye protection such as eclipse glasses. The eclipse will be visible beginning at approximately 10:15 west coast time as it begins its eastward race across the United States as the Earth rotates on its axis.

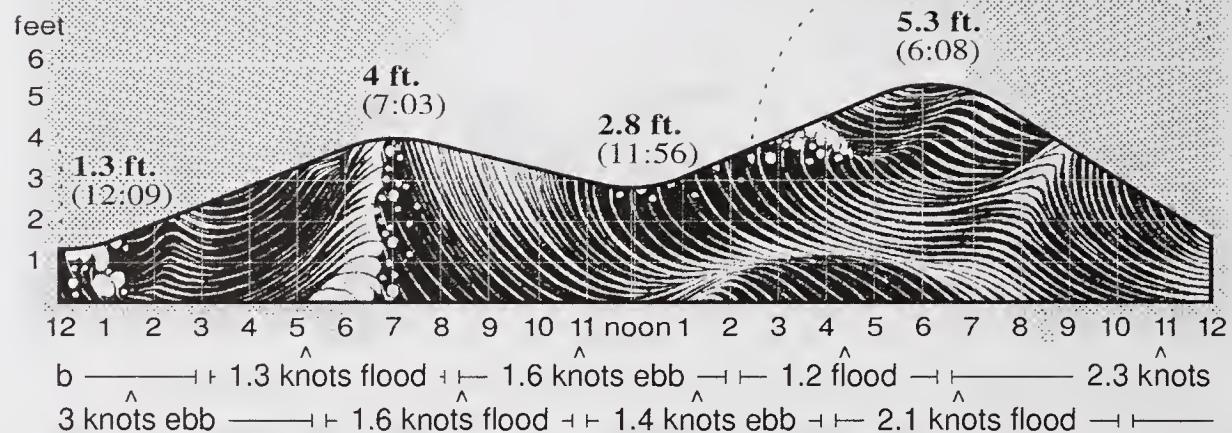
MON AUG 28

dawn 5:37 sunrise 6:37 sunset 7:44 dark 8:44
moonrise 1:27 p.m.



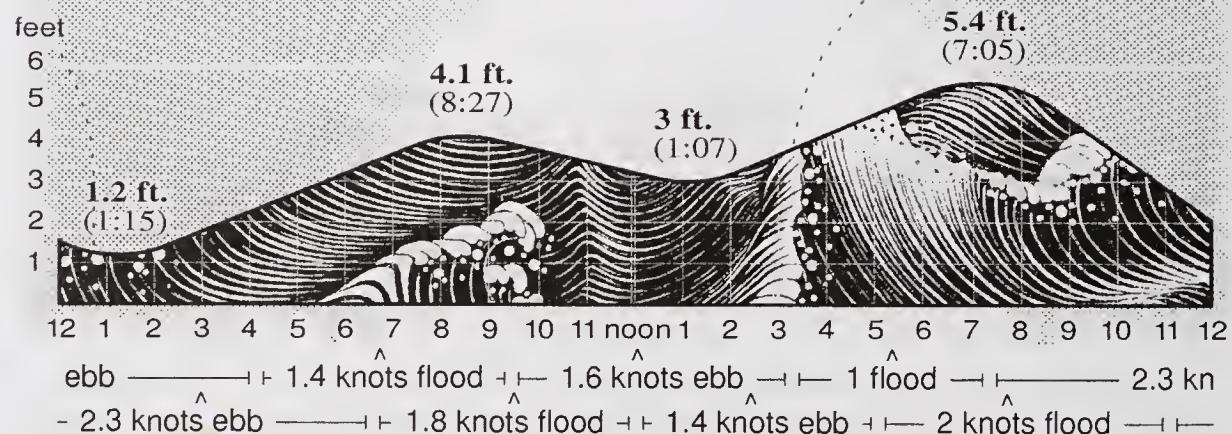
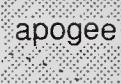
TUE AUG 29

dawn 5:38 sunrise 6:38 sunset 7:43 dark 8:42
moonset 12:05 a.m. moonrise 2:21 p.m.



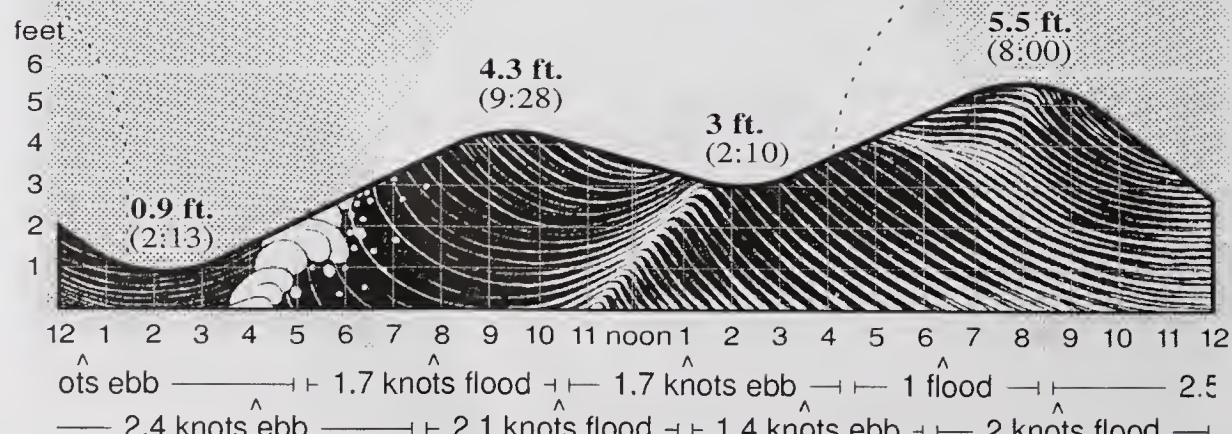
WED AUG 30

dawn 5:39 sunrise 6:39 sunset 7:41 dark 8:40
moonset 12:45 a.m. moonrise 3:14 p.m.



THU AUG 31

dawn 5:40 sunrise 6:39 sunset 7:40 dark 8:39
moonset 1:28 a.m. moonrise 4:04 p.m.

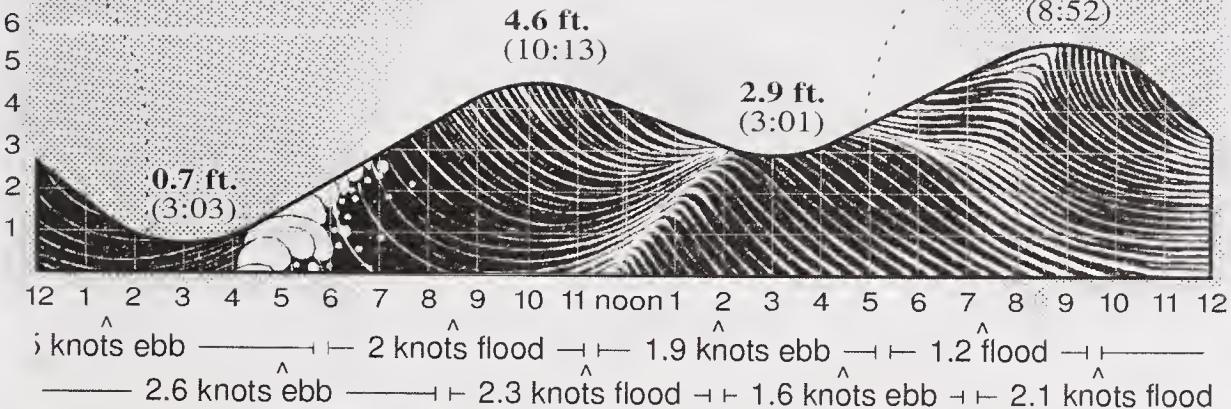


FRI SEP 1

dawn 5:41 sunrise 6:40 sunset 7:39 dark 8:37
moonset 2:16 a.m. moonrise 4:51 p.m.



feet

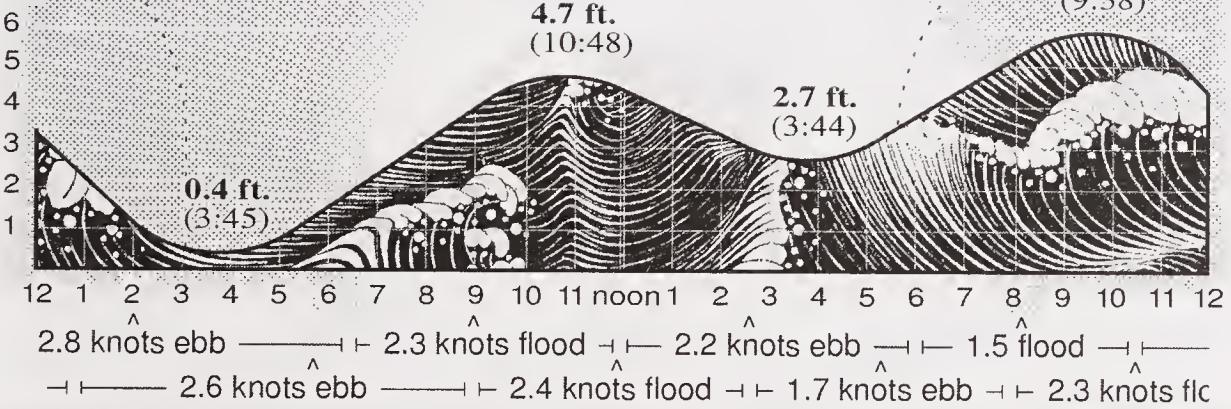


SAT SEP 2

dawn 5:42 sunrise 6:41 sunset 7:37 dark 8:36
moonset 3:07 a.m. moonrise 5:35 p.m.



feet

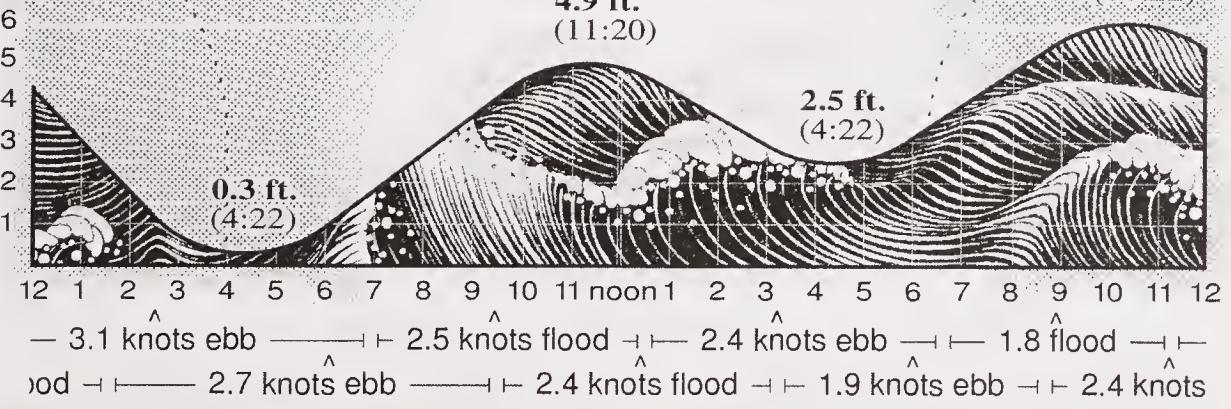


SUN SEP 3

dawn 5:43 sunrise 6:42 sunset 7:36 dark 8:34
moonset 4:02 a.m. moonrise 6:16 p.m.



feet



MON SEP 4

dawn 5:44 sunrise 6:43 sunset 7:34 dark 8:32
moonset 5:00 a.m. moonrise 6:54 p.m.

Labor Day



feet



12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
— 3.3 knots ebb — — 2.7 knots flood — — 2.6 knots ebb — — 2.1 knots flood —
flood — — 2.8 knots ebb — — 2.4 knots flood — — 2 knots ebb — — 2.5 knots

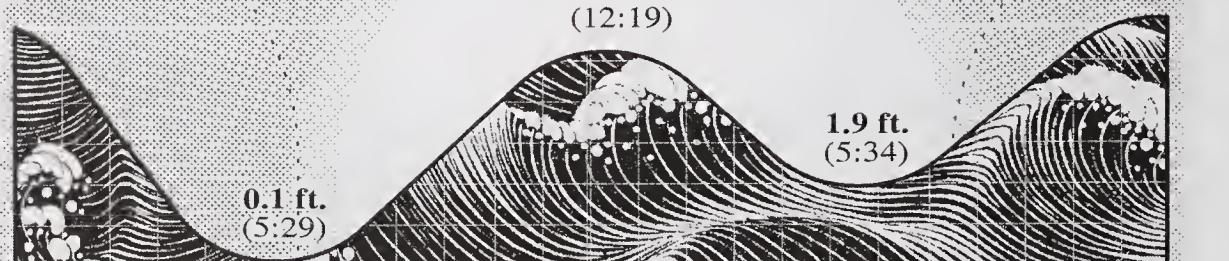
TUE SEP 5

dawn 5:45 sunrise 6:44 sunset 7:33 dark 8:31
moonset 6:01 a.m. moonrise 7:30 p.m.

Neptune at Opposition



feet



12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
— 3.5 knots ebb — — 2.9 knots flood — — 2.8 knots ebb — — 2.3 knots flood —
flood — — 2.9 knots ebb — — 2.5 knots flood — — 2.1 knots ebb — — 2.6 knots

WED SEP 6

dawn 5:46 sunrise 6:44 sunset 7:31 dark 8:29
moonset 7:03 a.m. moonrise 8:05 p.m.



Full Moon 12:03 a.m.

feet



12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
— 3.7 knots ebb — — 3.1 knots flood — — 3.1 knots ebb — — 2.4 knots flood —
flood — — 3 knots ebb — — 2.6 knots flood — — 2.3 knots ebb — — 2.1 knots

THU SEP 7

dawn 5:47 sunrise 6:45 sunset 7:29 dark 8:27
moonset 8:06 a.m. moonrise 8:39 p.m.



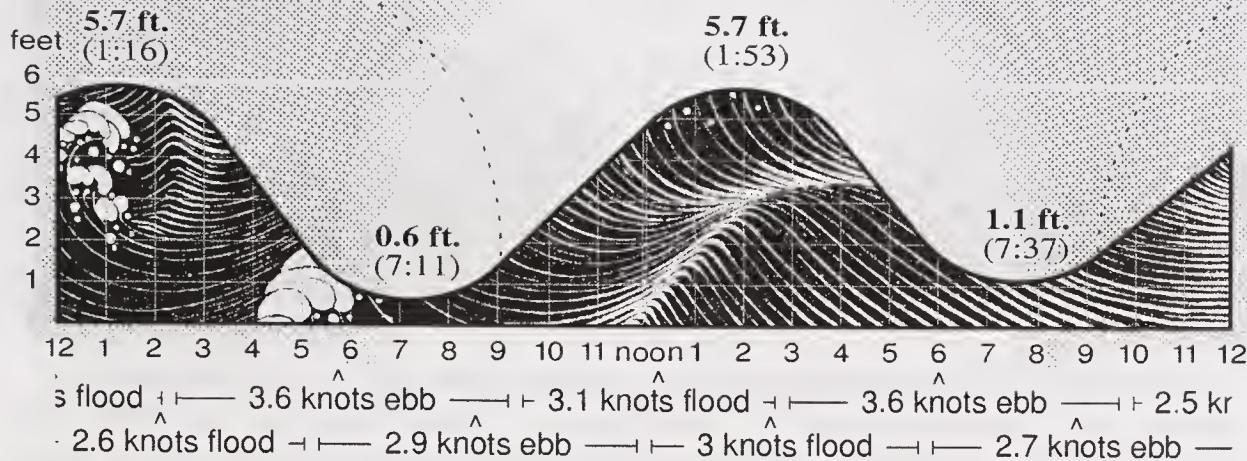
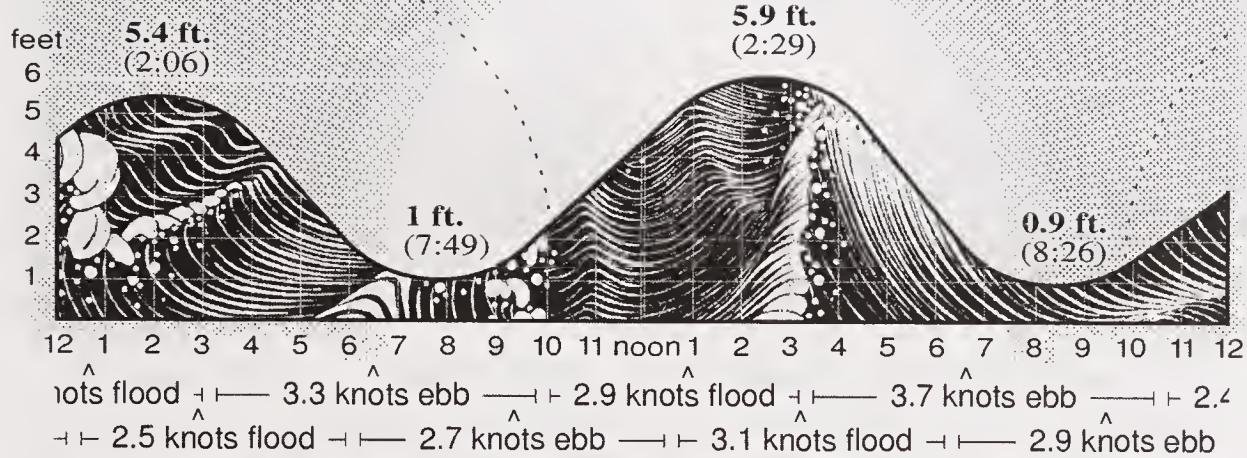
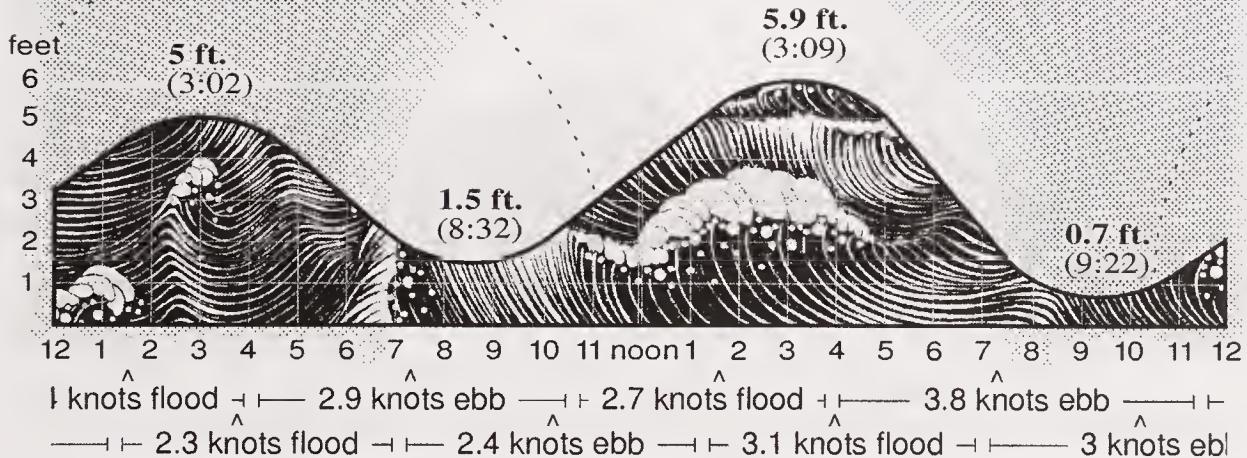
equator

5.9 ft.

feet (12:30)



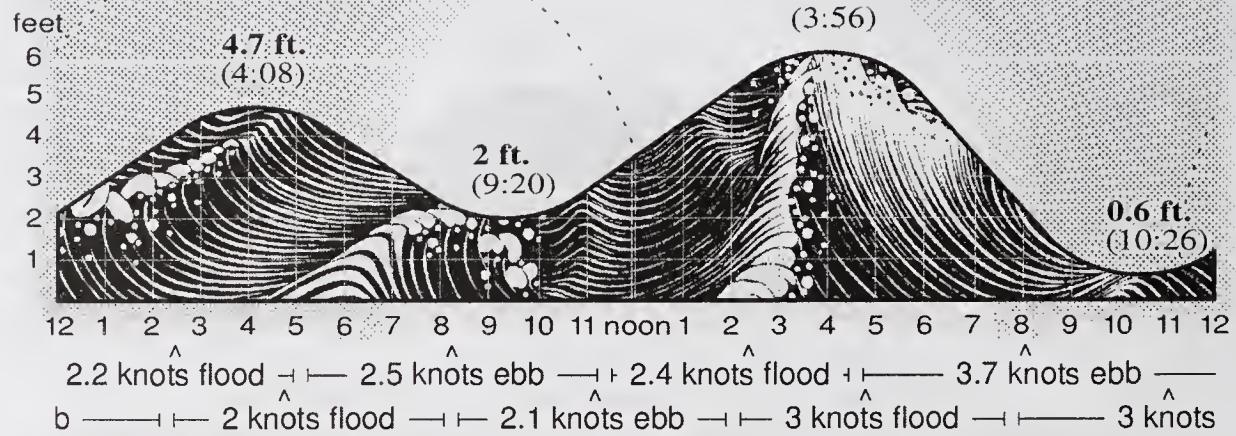
12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
— 3.7 knots ebb — — 3.1 knots flood — — 3.3 knots ebb — — 2.5 knots flood —
flood — — 3 knots ebb — — 2.8 knots flood — — 2.5 knots ebb — — 2.3 knots

FRI SEP 8dawn 5:48 sunrise 6:46 sunset 7:28 dark 8:26
moonset 9:11 a.m. moonrise 9:14 p.m.**SAT SEP 9**dawn 5:49 sunrise 6:47 sunset 7:26 dark 8:24
moonset 10:16 a.m. moonrise 9:51 p.m.**SUN SEP 10**dawn 5:50 sunrise 6:48 sunset 7:25 dark 8:22
moonset 11:23 a.m. moonrise 10:30 p.m.

Neptune at Opposition Neptune, the eighth planet from the Sun, will be at its closest approach to Earth on September 5th. The Sun will illuminate Neptune and it will be visible all night long. Neptune will rise early evening in the south east sky and pass over head and set early morning in the west south west. Even at its closest approach to Earth and then with the aid of a large telescope, Neptune will appear only a bright spot or blue dot.

MON SEP 11

dawn 5:51 sunrise 6:49 sunset 7:23 dark 8:21
moonset 12:29 p.m. moonrise 11:14 p.m.

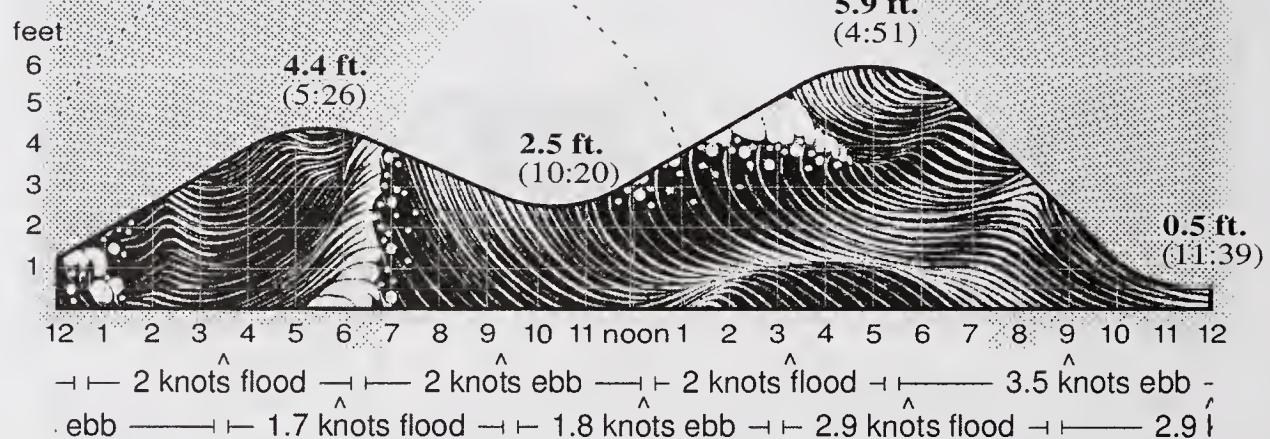


TUE SEP 12

dawn 5:52 sunrise 6:49 sunset 7:22 dark 8:19
moonset 1:35 p.m.



Mercury Western Elongation

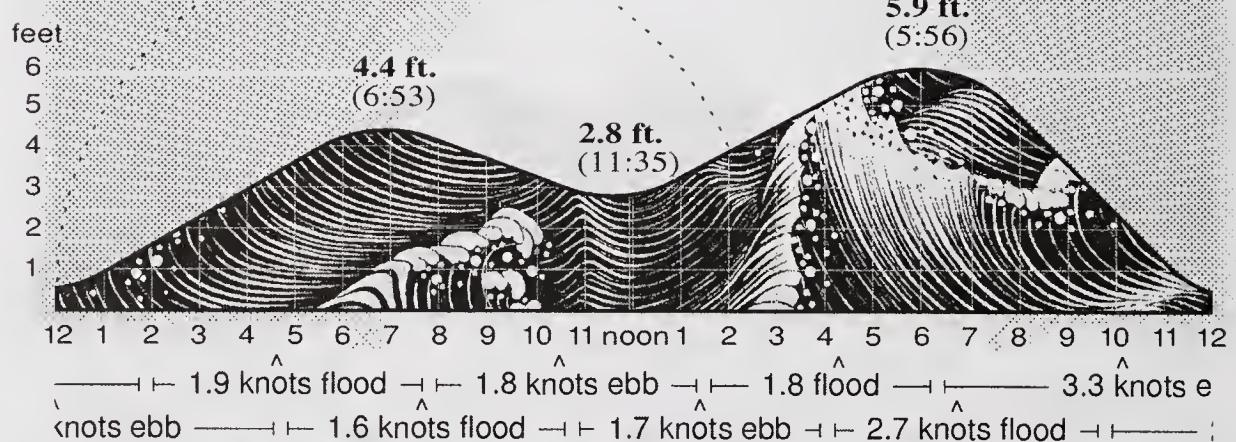


WED SEP 13

dawn 5:53 sunrise 6:50 sunset 7:20 dark 8:18
moonrise 12:03 a.m. moonset 2:38 p.m.



perigee

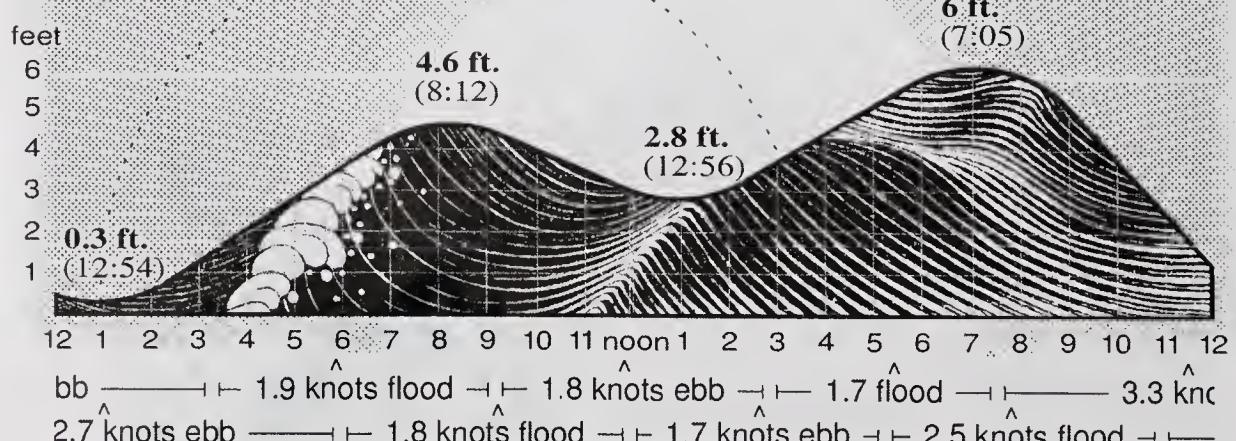


THU SEP 14

dawn 5:54 sunrise 6:51 sunset 7:19 dark 8:16
moonrise 12:58 a.m. moonset 3:37 p.m.

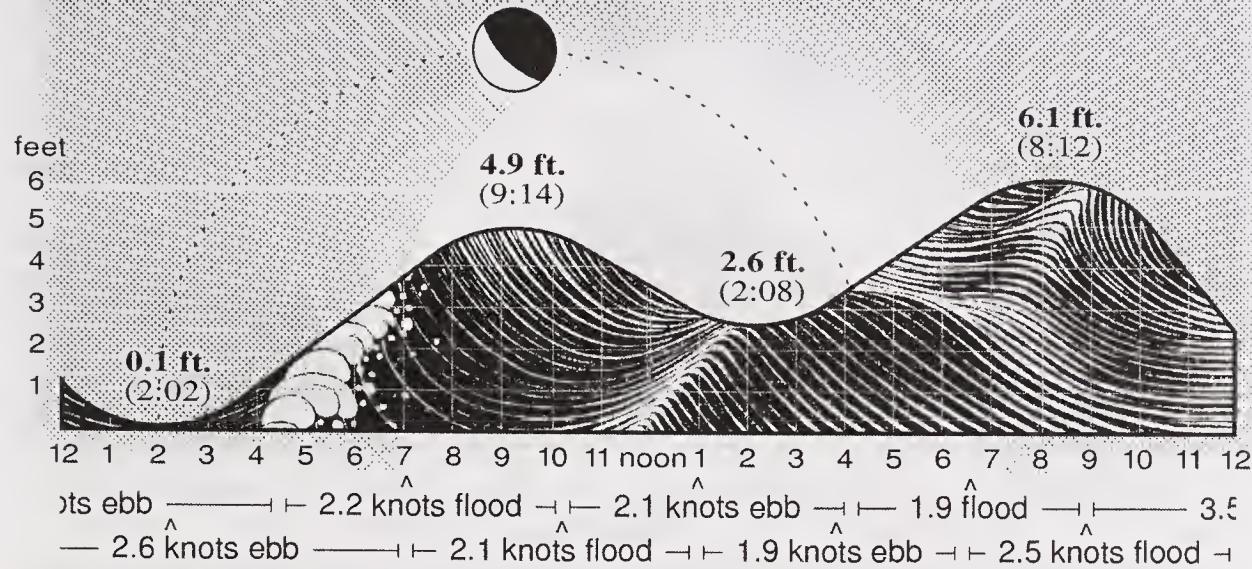


North



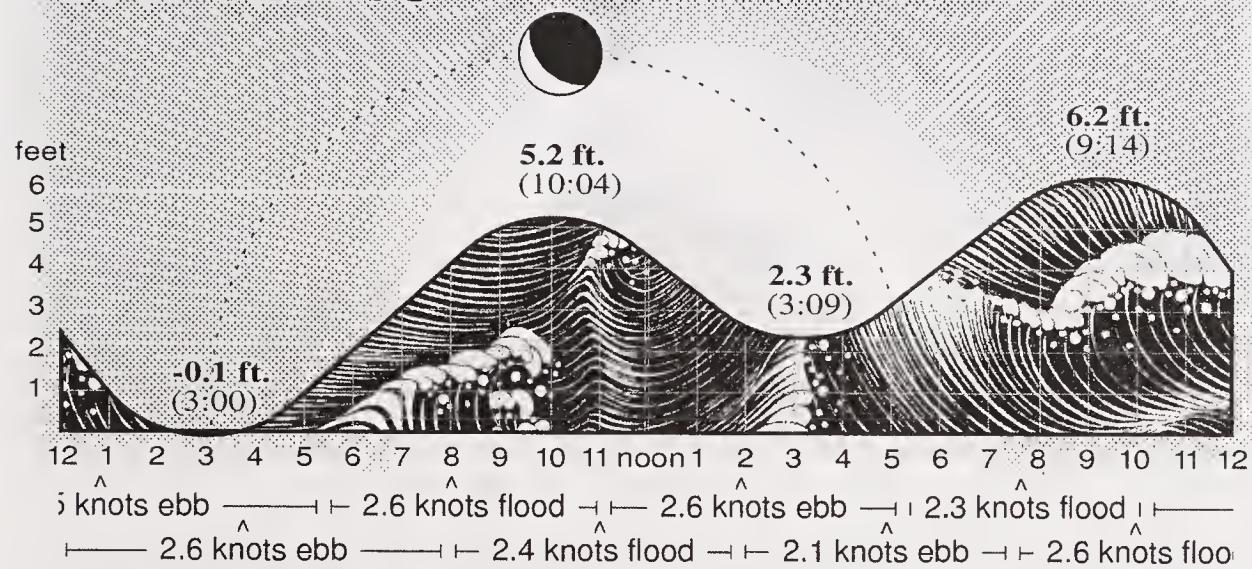
FRI SEP 15

dawn 5:55 sunrise 6:52 sunset 7:17 dark 8:14
moonrise 1:57 a.m. moonset 4:30 p.m.



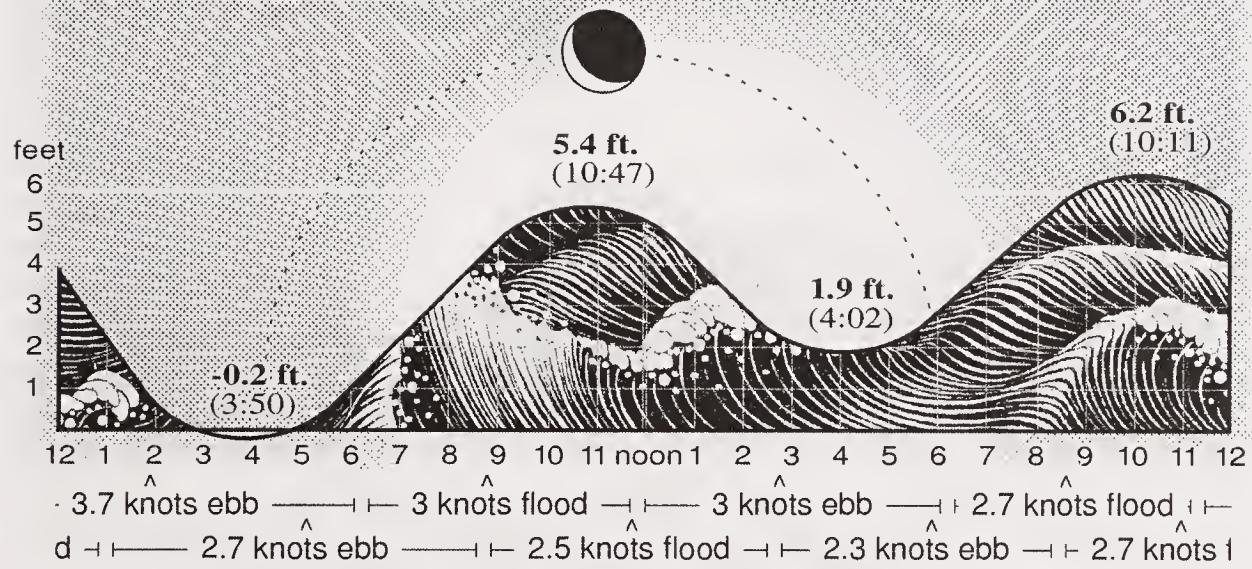
SAT SEP 16

dawn 5:56 sunrise 6:53 sunset 7:16 dark 8:13
moonrise 3:01 a.m. moonset 5:18 p.m.



SUN SEP 17

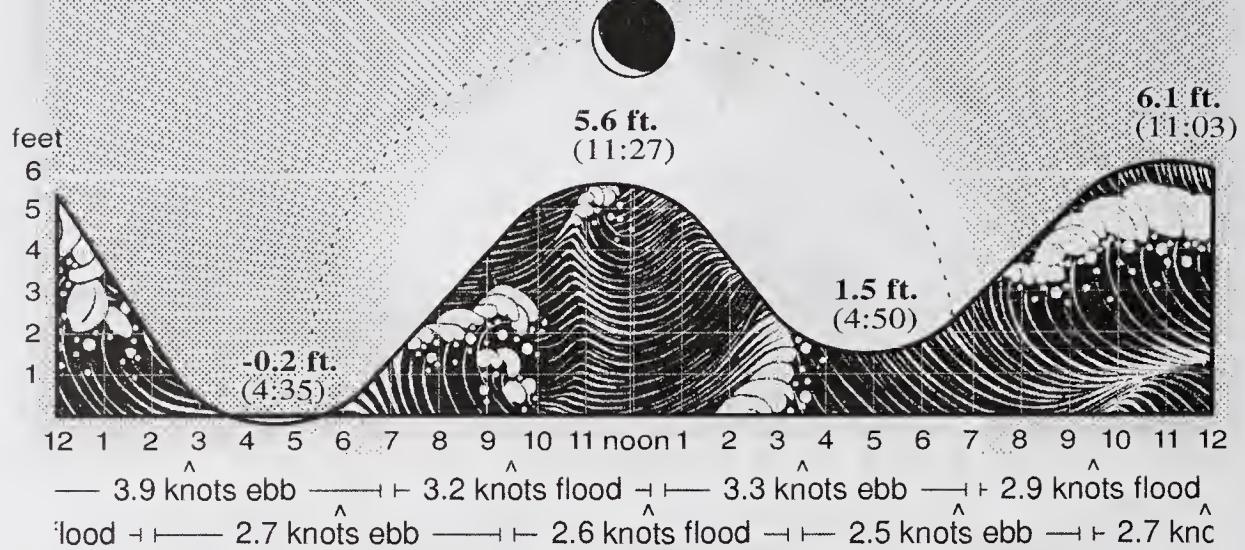
dawn 5:57 sunrise 6:54 sunset 7:14 dark 8:11
moonrise 4:06 a.m. moonset 6:00 p.m.



J

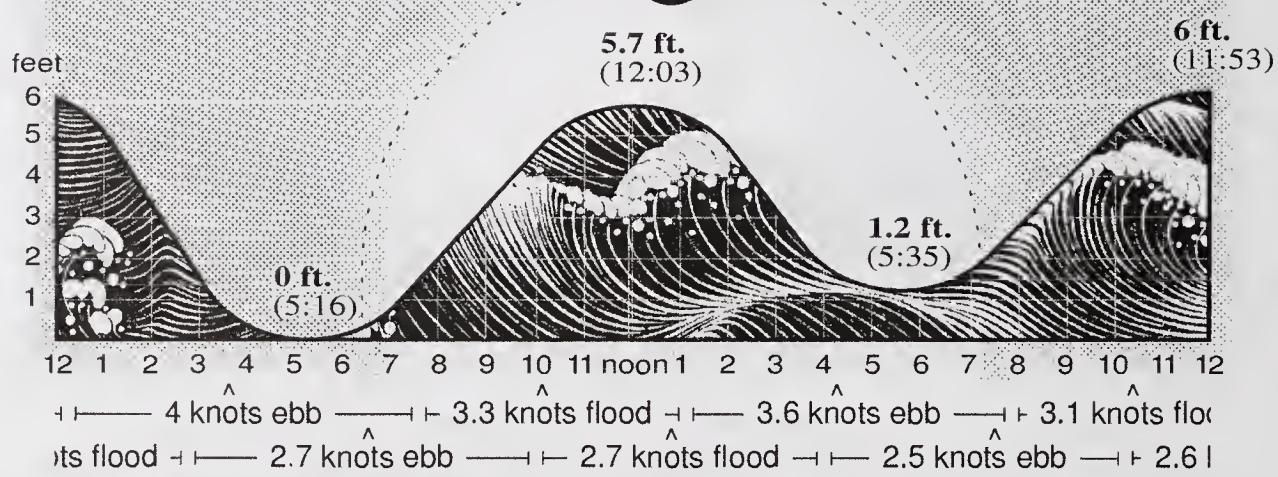
S

MON SEP 18 dawn 5:57 sunrise 6:55 sunset 7:12 dark 8:09
moonrise 5:11 a.m. moonset 6:39 p.m.



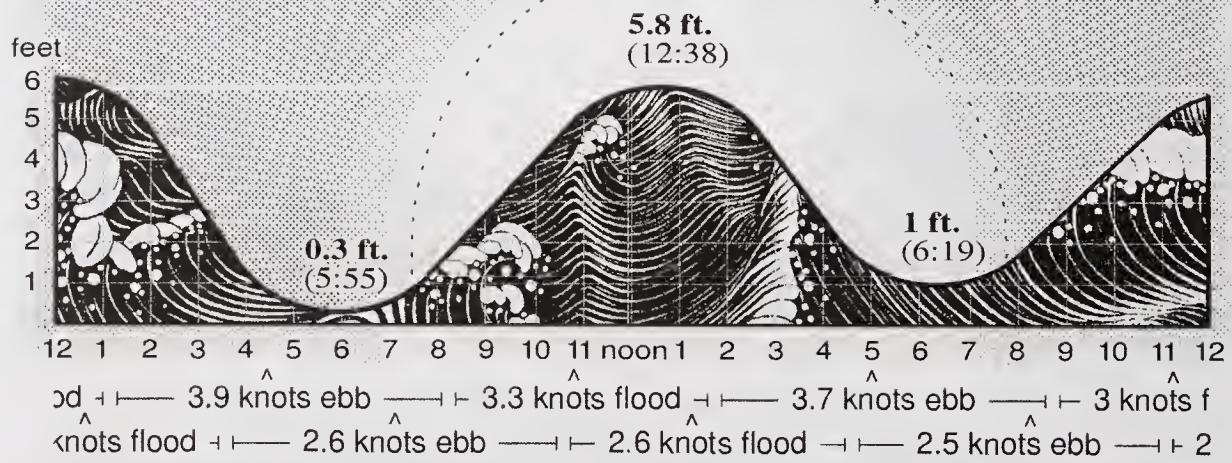
TUE SEP 19 dawn 5:58 sunrise 6:55 sunset 7:11 dark 8:08
moonrise 6:16 a.m. moonset 7:14 p.m.

New Moon 10:30 p.m.

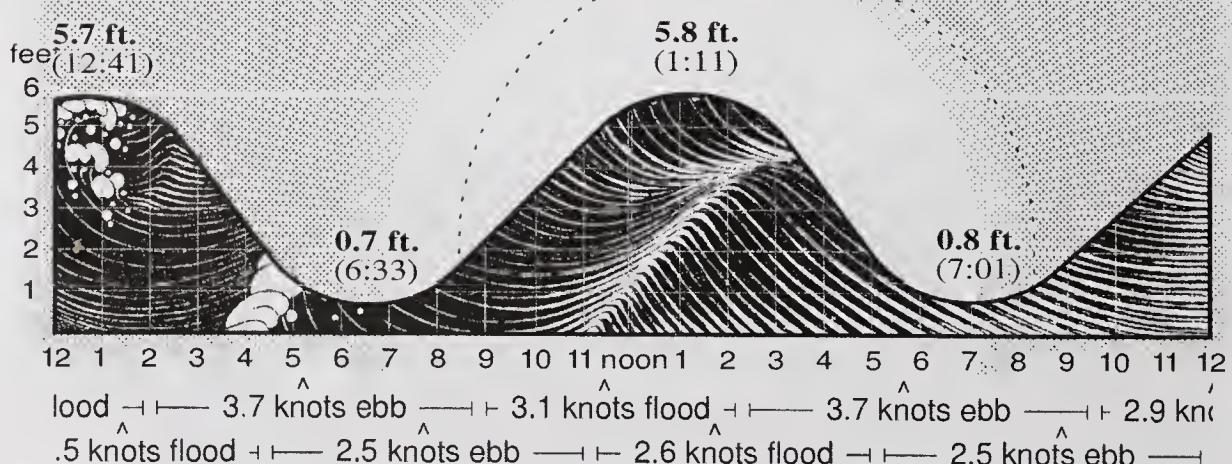


WED SEP 20 dawn 5:59 sunrise 6:56 sunset 7:09 dark 8:06
moonrise 7:19 a.m. moonset 7:47 p.m.

equator



THU SEP 21 dawn 6:00 sunrise 6:57 sunset 7:08 dark 8:05
moonrise 8:21 a.m. moonset 8:20 p.m.



FRI SEP 22

dawn 6:01 sunrise 6:58 sunset 7:06 dark 8:03
moonrise 9:20 a.m. moonset 8:52 p.m.

Autumnal Equinox 1:02 p.m.



feet 5.4 ft.
(1:28)

5.7 ft.
(1:43)



SAT SEP 23

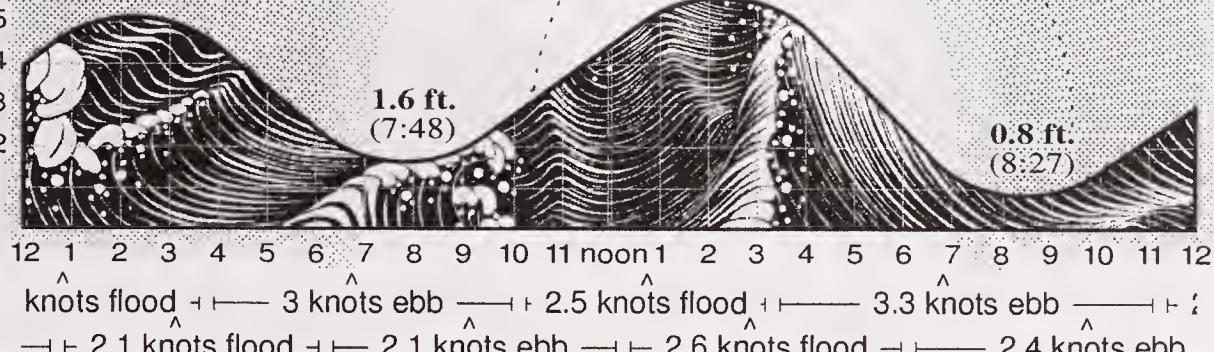
dawn 6:02 sunrise 6:59 sunset 7:05 dark 8:01
moonrise 10:19 a.m. moonset 9:26 p.m.



feet 5.1 ft.
(2:17)

5.6 ft.
(2:15)

0.8 ft.
(8:27)



SUN SEP 24

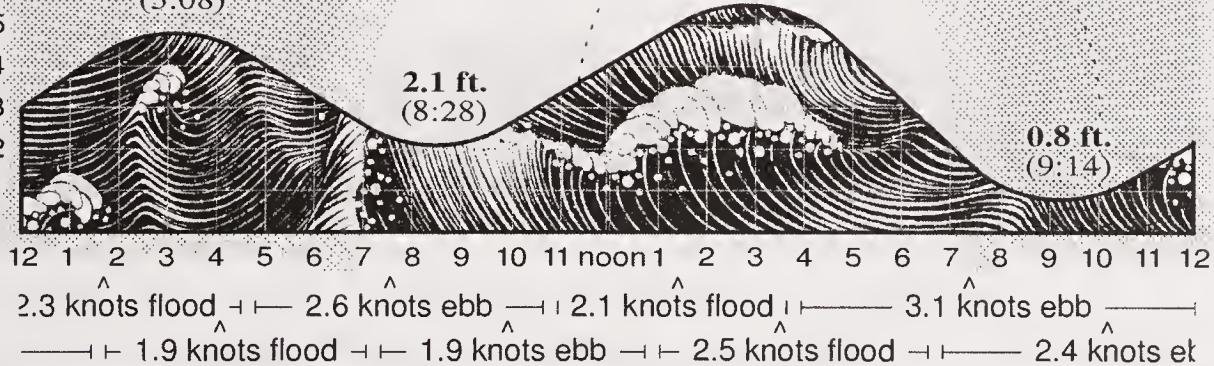
dawn 6:03 sunrise 7:00 sunset 7:03 dark 8:00
moonrise 11:16 a.m. moonset 10:02 p.m.



feet 4.8 ft.
(3:08)

5.5 ft.
(2:49)

0.8 ft.
(9:14)



Autumnal Equinox On September 22nd, the Sun will be directly over the equator and the amount of daylight and darkness will almost be equal throughout the world. This marks the first day of the Fall Season in the Northern Hemisphere.

MON SEP 25

dawn 6:04 sunrise 7:01 sunset 7:02 dark 7:58
moonrise 12:11 p.m. moonset 10:40 p.m.



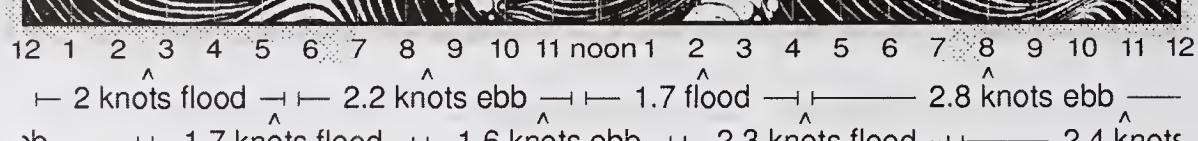
feet

4.5 ft.
(4:06)

5.3 ft.
(3:27)

2.6 ft.
(9:13)

1 ft.
(10:06)



TUE SEP 26

dawn 6:05 sunrise 7:01 sunset 7:00 dark 7:57
moonrise 1:05 p.m. moonset 11:22 p.m.



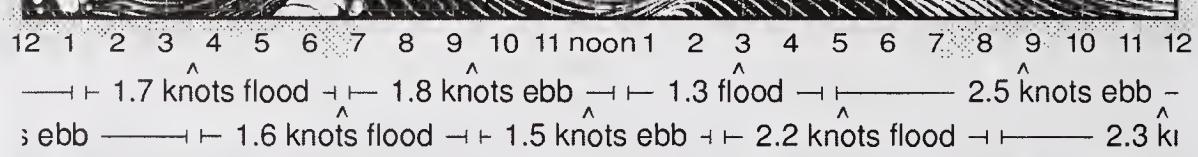
feet

4.2 ft.
(5:14)

5.1 ft.
(4:13)

3 ft.
(10:10)

1 ft.
(11:08)



WED SEP 27

dawn 6:06 sunrise 7:02 sunset 6:58 dark 7:55
moonrise 1:56 p.m.



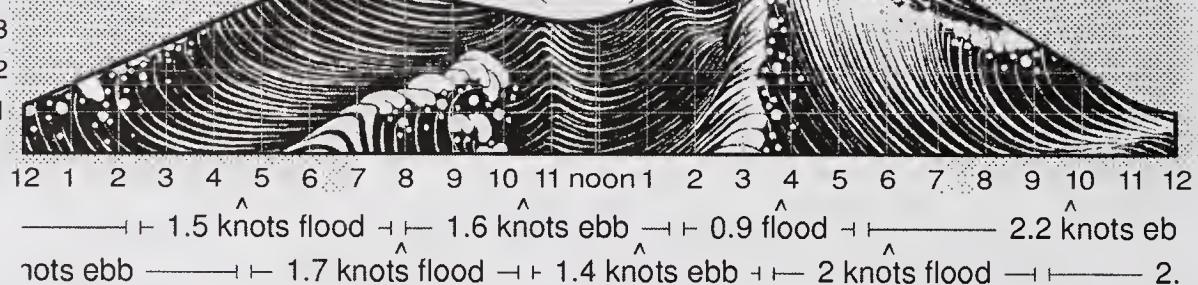
apogee

feet

4.2 ft.
(6:34)

5 ft.
(5:09)

3.2 ft.
(11:26)



THU SEP 28

dawn 6:06 sunrise 7:03 sunset 6:57 dark 7:53
moonset 12:07 a.m. moonrise 2:44 p.m.



South

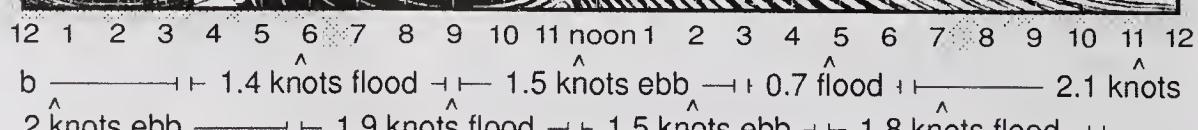
feet

1 ft.
(12:14)

4.3 ft.
(7:50)

4.9 ft.
(6:13)

3.2 ft.
(12:45)

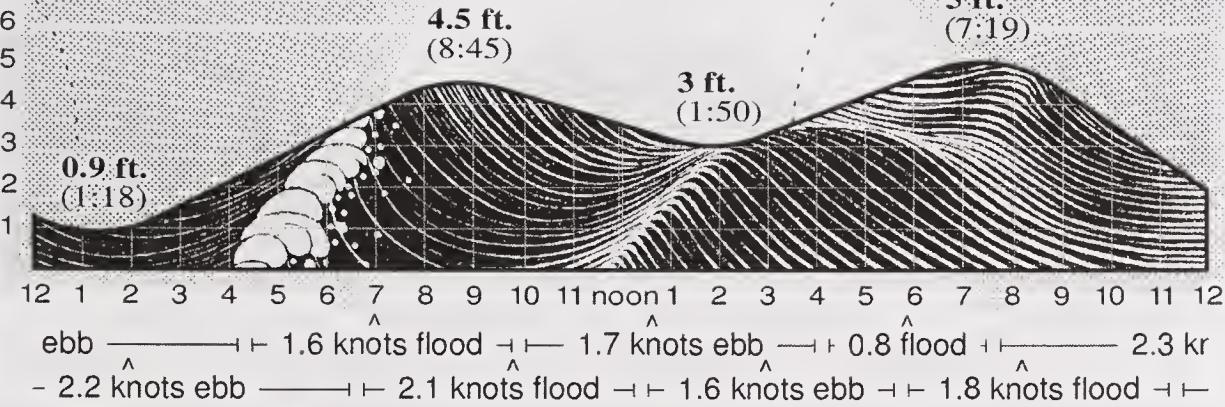


FRI SEP 29

dawn 6:07 sunrise 7:04 sunset 6:55 dark 7:52
moonset 12:57 a.m. moonrise 3:29 p.m.



feet



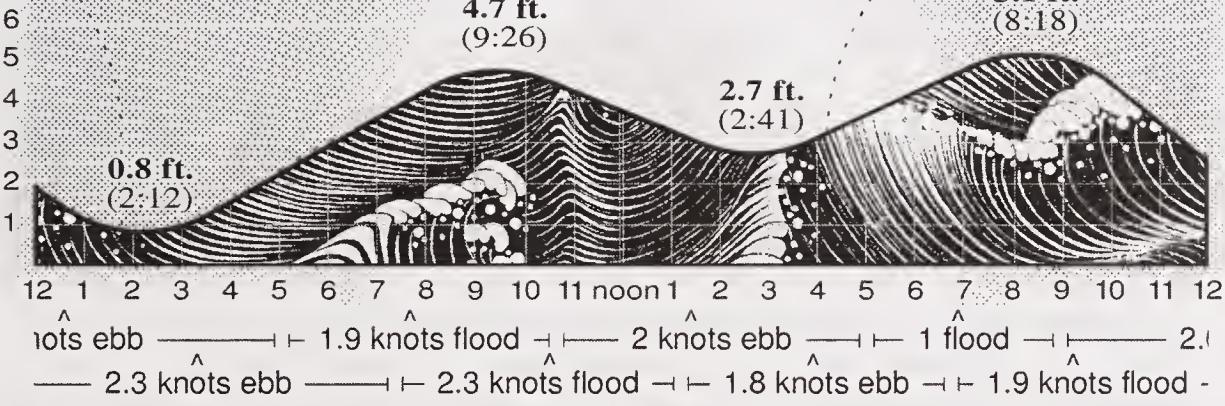
SAT SEP 30

dawn 6:08 sunrise 7:05 sunset 6:54 dark 7:50
moonset 1:50 a.m. moonrise 4:11 p.m.

Yom Kippur



feet

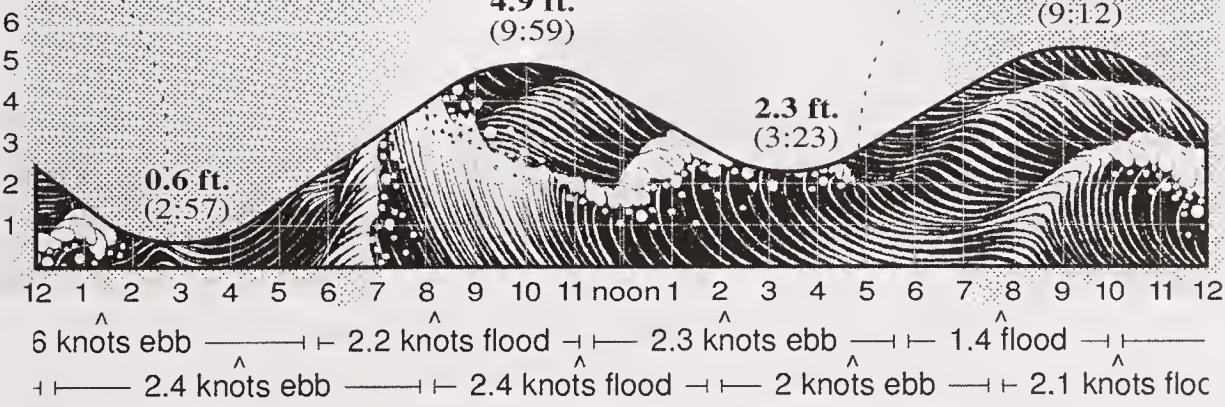


SUN OCT 1

dawn 6:09 sunrise 7:06 sunset 6:52 dark 7:49
moonset 2:46 a.m. moonrise 4:50 p.m.



feet



(1)

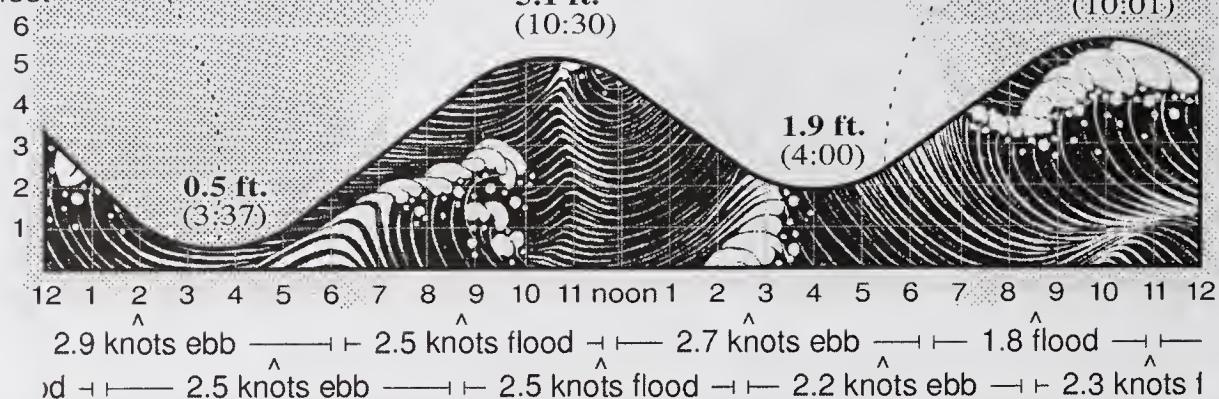
(2)

MON OCT 2

dawn 6:10 sunrise 7:07 sunset 6:51 dark 7:47
moonset 3:45 a.m. moonrise 5:27 p.m.



feet

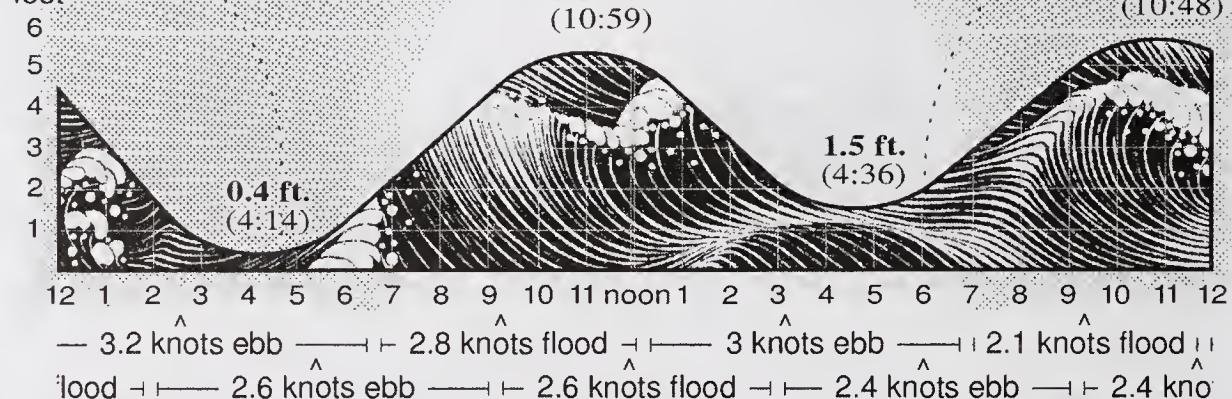


TUE OCT 3

dawn 6:11 sunrise 7:08 sunset 6:49 dark 7:46
moonset 4:47 a.m. moonrise 6:02 p.m.



feet

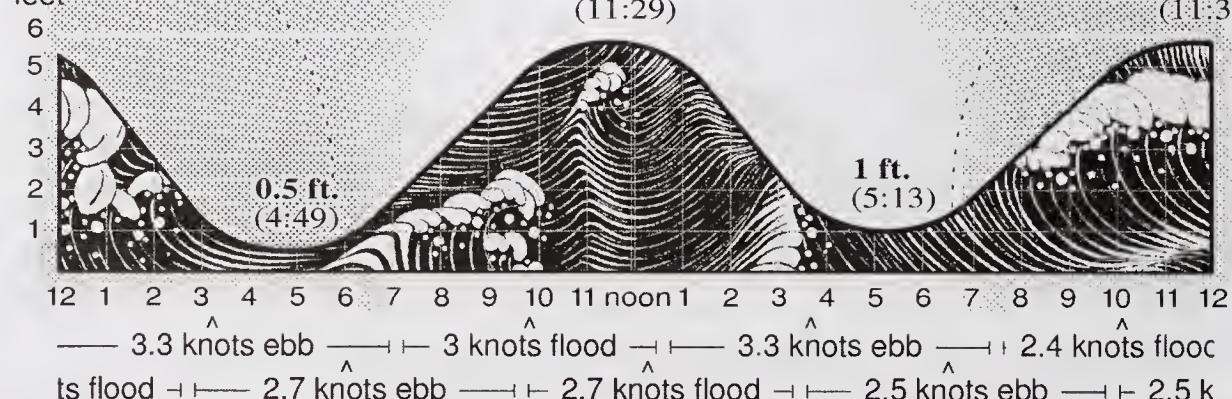


WED OCT 4

dawn 6:12 sunrise 7:08 sunset 6:48 dark 7:44
moonset 5:50 a.m. moonrise 6:36 p.m.



feet



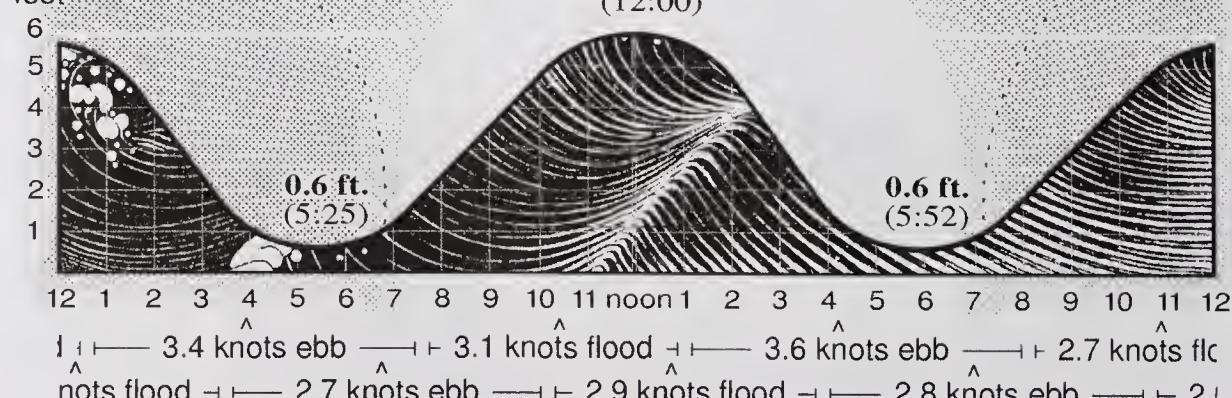
THU OCT 5

dawn 6:13 sunrise 7:09 sunset 6:46 dark 7:43
moonset 6:55 a.m. moonrise 7:12 p.m.



Full Moon 11:40 a.m.

feet



FRI OCT 6

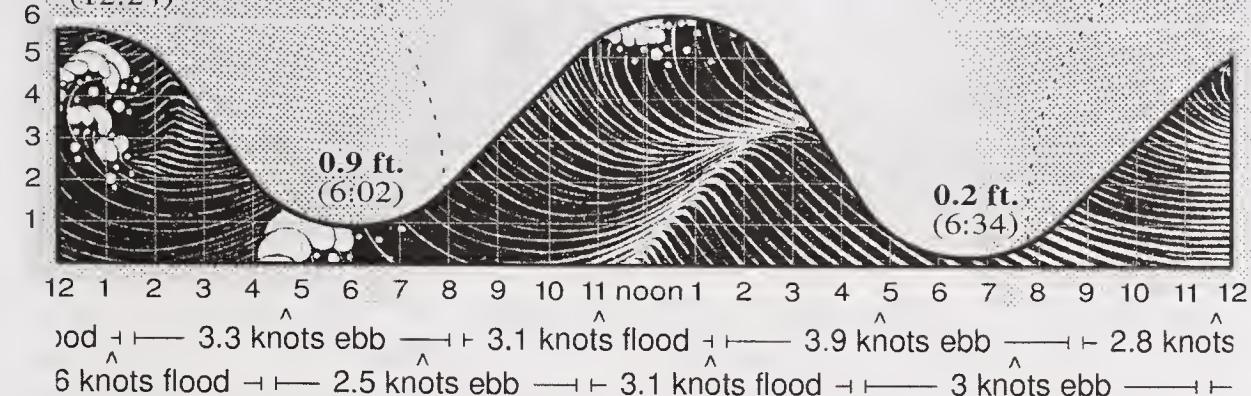
dawn 6:14 sunrise 7:10 sunset 6:45 dark 7:41
moonset 8:02 a.m. moonrise 7:48 p.m.



HSB

feet 5.6 ft.
(12:24)

6 ft.
(12:33)



SAT OCT 7

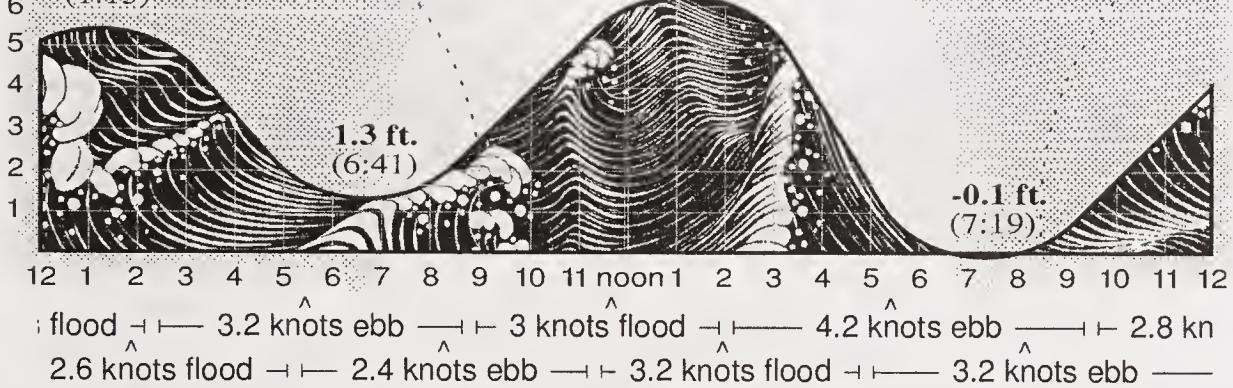
dawn 6:15 sunrise 7:11 sunset 6:43 dark 7:40
moonset 9:10 a.m. moonrise 8:28 p.m.



HSB

feet 5.4 ft.
(1:15)

6.2 ft.
(1:09)



SUN OCT 8

dawn 6:15 sunrise 7:12 sunset 6:42 dark 7:38
moonset 10:19 a.m. moonrise 9:11 p.m.

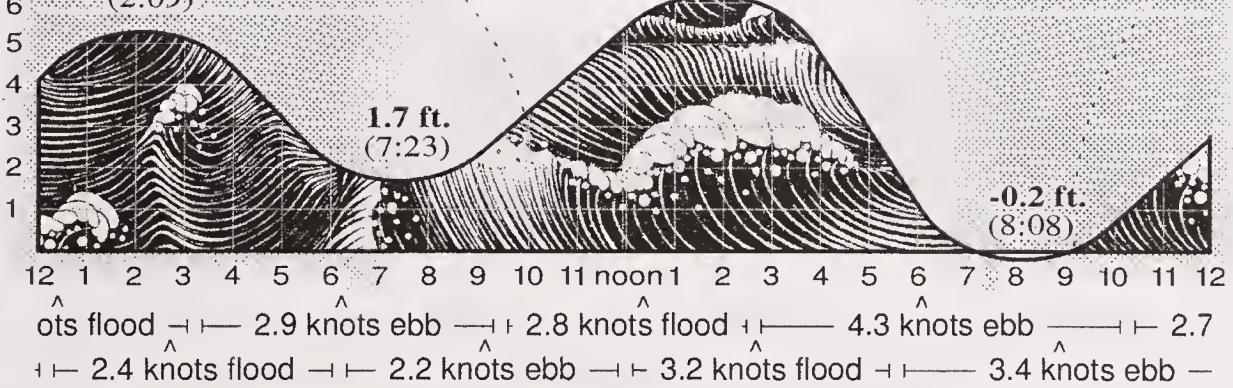


perigee

HSB

feet 5.3 ft.
(2:09)

6.2 ft.
(1:47)

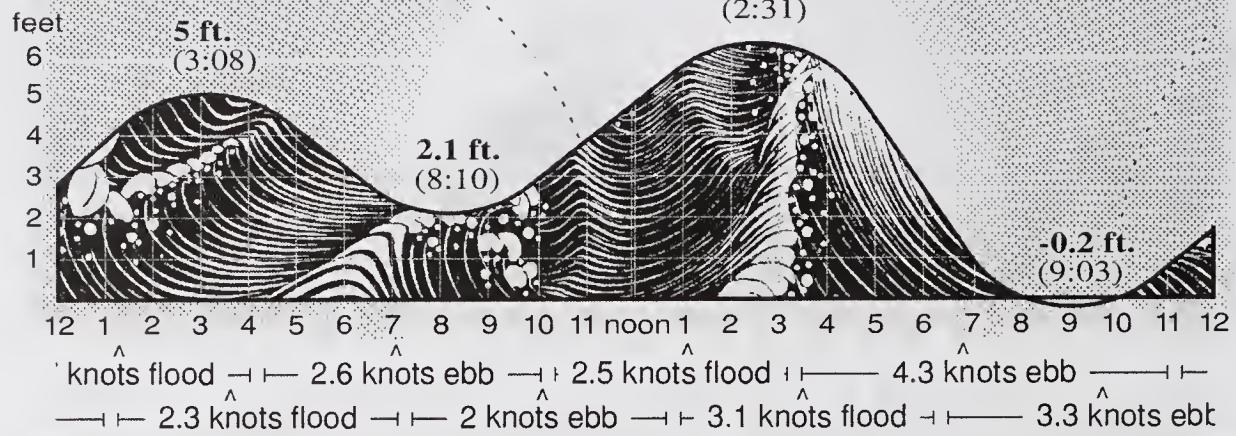


Draconids Meteor Shower The Draconids run annually between October 6th and 10th and are a minor shower producing up to 10 meteors per hour at zenith. This year's zenith falls on evening of October 7th. Unfortunately, the Draconids will be overwhelmed by the two night old Harvest Moon. Traditionally the full moon closest to the Autumnal Equinox is known as the Harvest Moon. To find the Draconids' radiant point, look for the constellation Draco that will be high overhead by early evening on the 7th and to the west of the Little Dipper. Perhaps, you will be rewarded for the effort despite the Harvest Moon's interference.

MON OCT 9

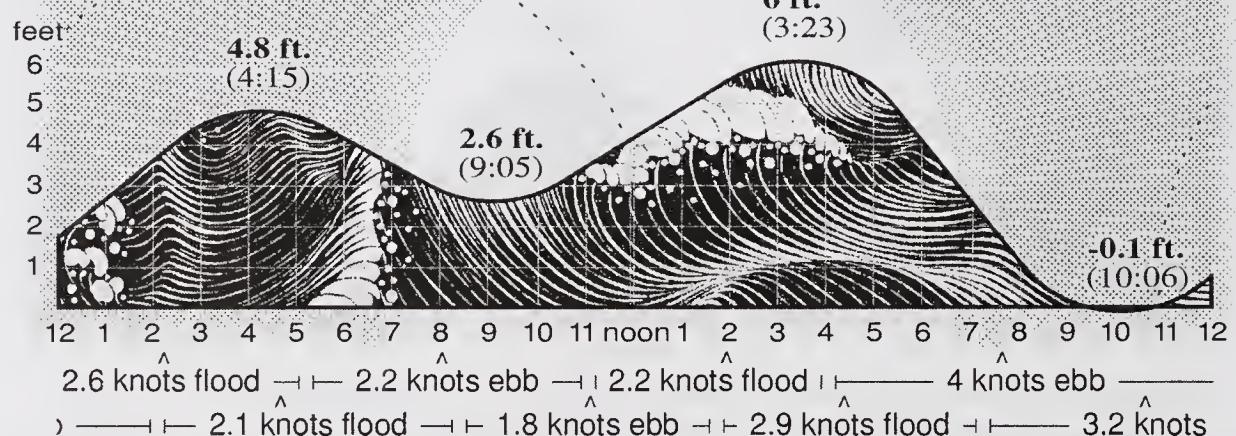
dawn 6:16 sunrise 7:13 sunset 6:40 dark 7:37
moonset 11:27 a.m. moonrise 9:59 p.m.

Columbus Day



TUE OCT 10

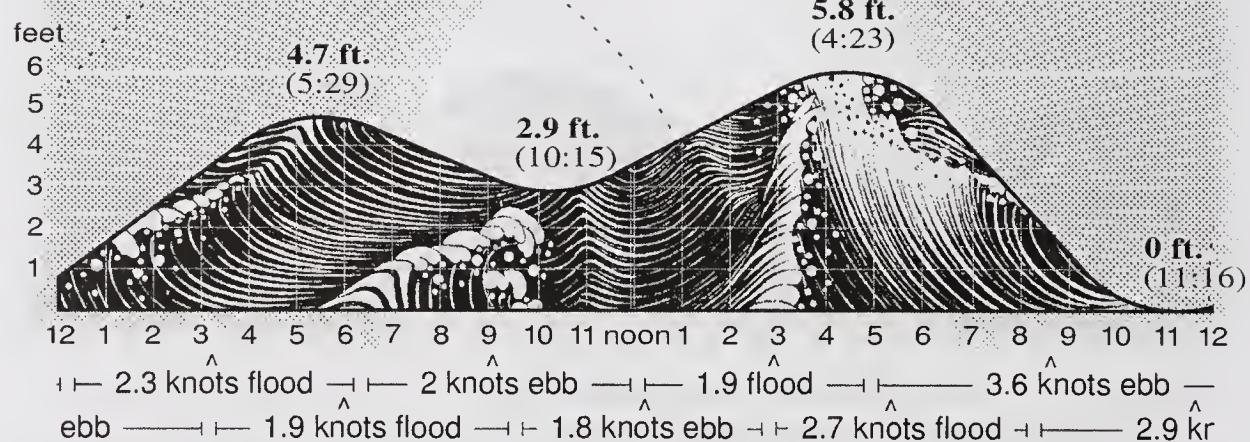
dawn 6:17 sunrise 7:14 sunset 6:39 dark 7:36
moonset 12:32 p.m. moonrise 10:53 p.m.



WED OCT 11

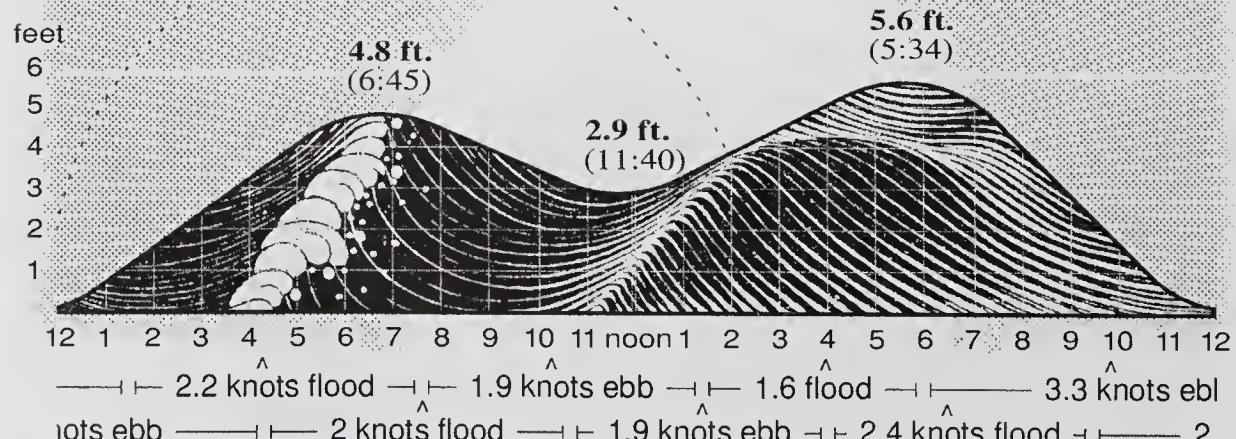
dawn 6:18 sunrise 7:15 sunset 6:38 dark 7:34
moonset 1:33 p.m. moonrise 11:51 p.m.

North



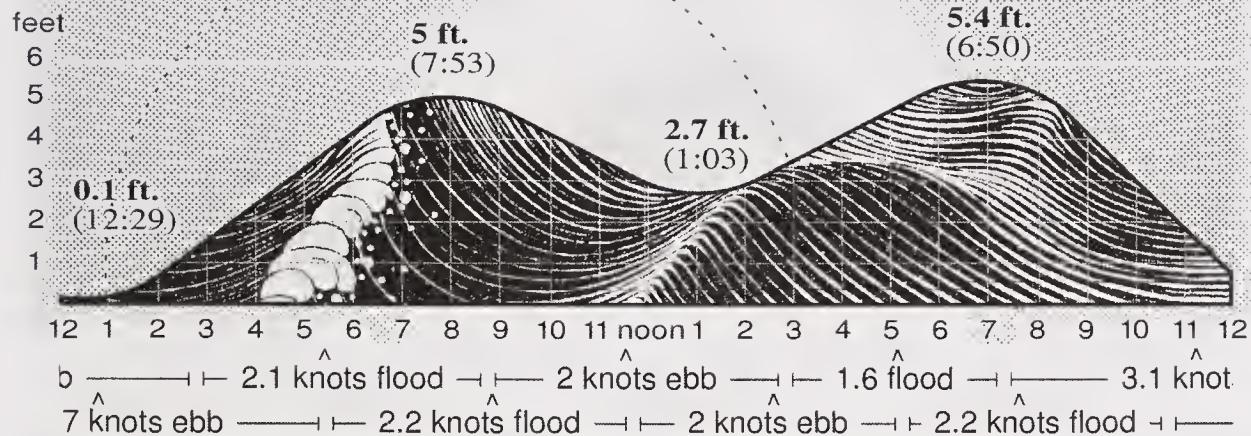
THU OCT 12

dawn 6:19 sunrise 7:16 sunset 6:36 dark 7:33
moonset 2:28 p.m.



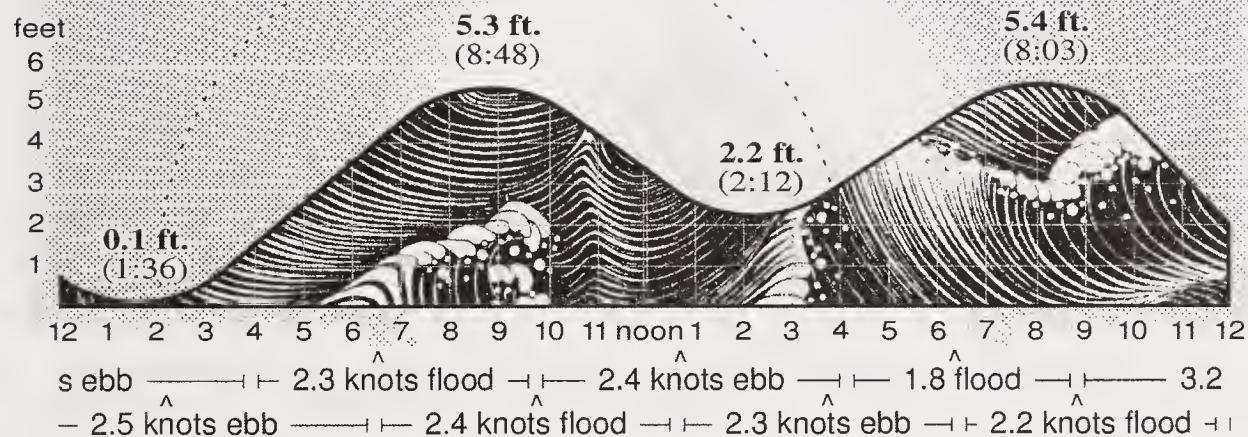
FRI OCT 13

dawn 6:20 sunrise 7:17 sunset 6:35 dark 7:31
moonrise 12:53 a.m. moonset 3:17 p.m.



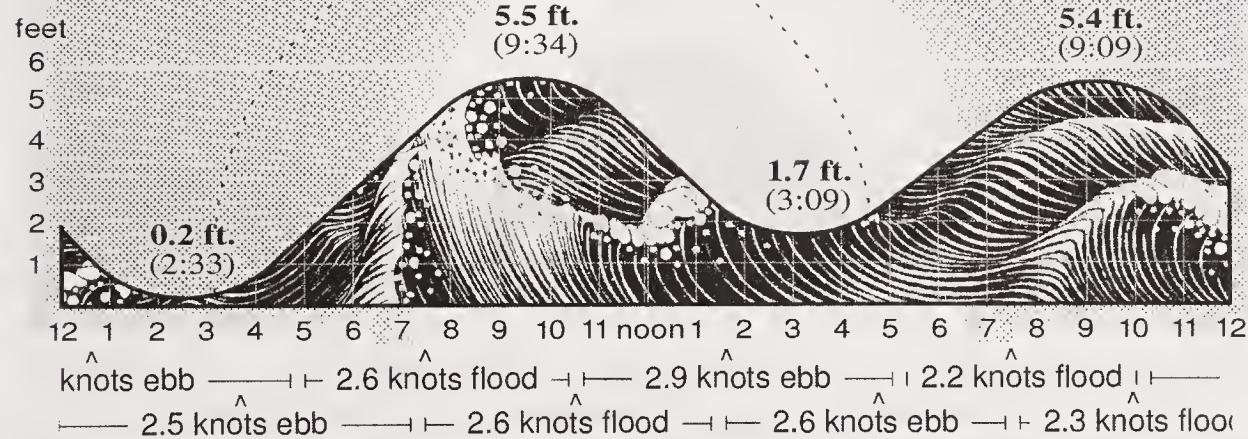
SAT OCT 14

dawn 6:21 sunrise 7:18 sunset 6:33 dark 7:30
moonrise 1:57 a.m. moonset 4:00 p.m.



SUN OCT 15

dawn 6:22 sunrise 7:19 sunset 6:32 dark 7:29
moonrise 3:01 a.m. moonset 4:38 p.m.



MON OCT 16

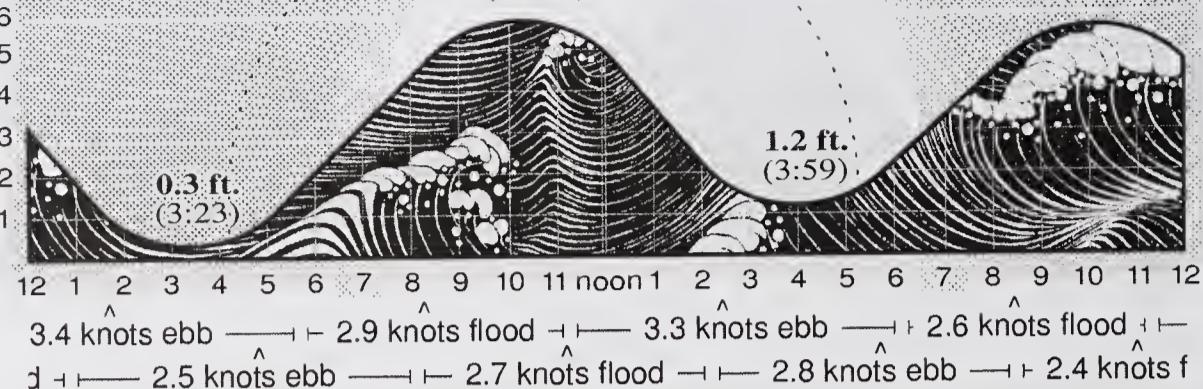
dawn 6:23 sunrise 7:20 sunset 6:31 dark 7:27
moonrise 4:05 a.m. moonset 5:14 p.m.



feet

5.7 ft.
(10:15)

5.5 ft.
(10:08)



TUE OCT 17

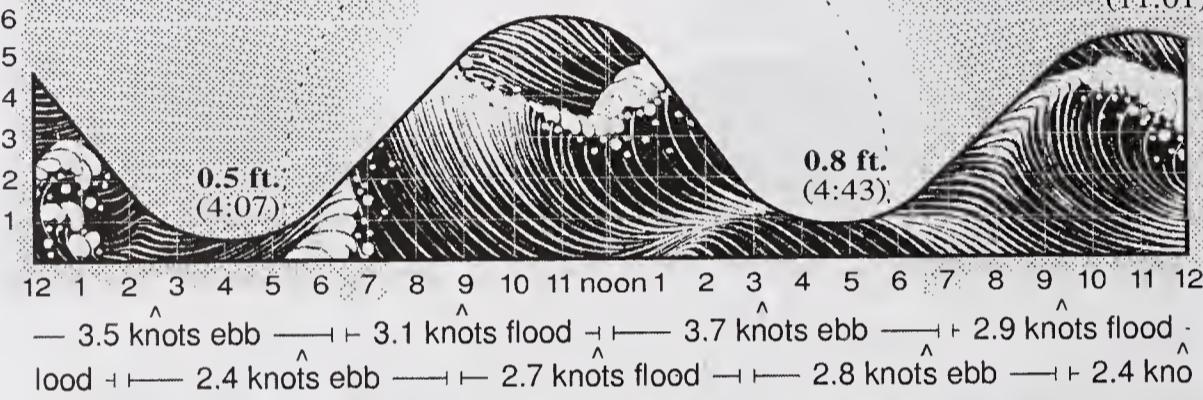
dawn 6:24 sunrise 7:21 sunset 6:29 dark 7:26
moonrise 5:07 a.m. moonset 5:47 p.m.



feet

5.9 ft.
(10:51)

5.4 ft.
(11:01)



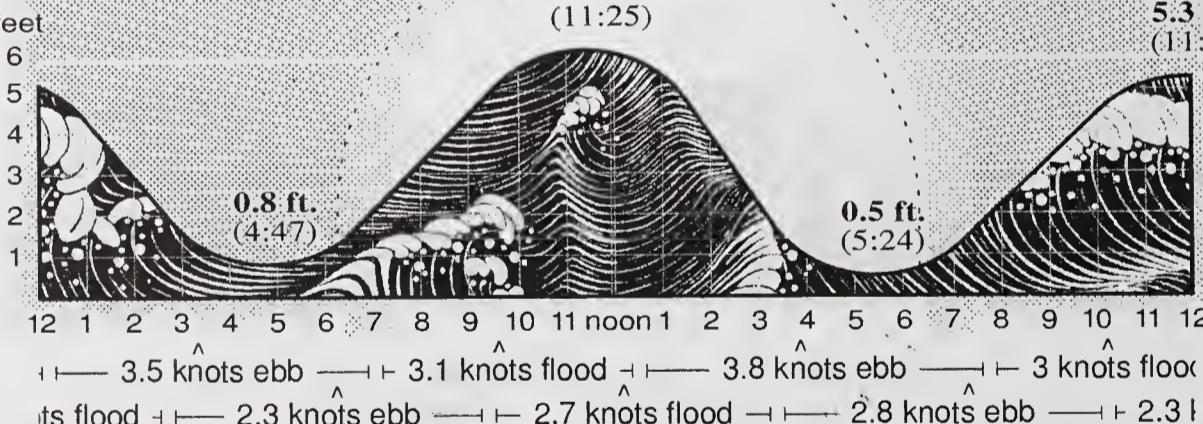
WED OCT 18

dawn 6:24 sunrise 7:22 sunset 6:28 dark 7:25
moonrise 6:09 a.m. moonset 6:19 p.m.

equator

6 ft.
(11:25)

5.3 ft.
(11:51)



THU OCT 19

dawn 6:25 sunrise 7:23 sunset 6:26 dark 7:24
moonrise 7:09 a.m. moonset 6:51 p.m.

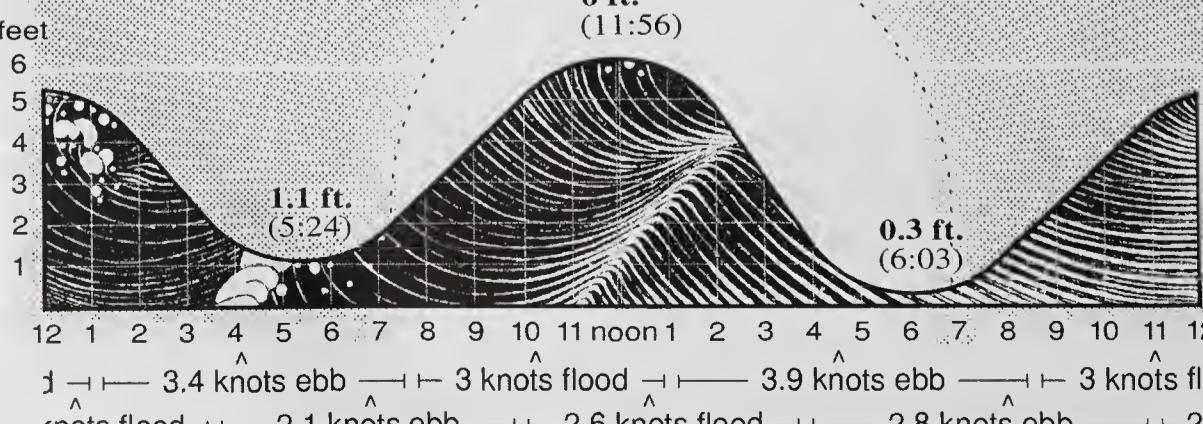
Uranus at Opposition

New Moon 12:12 p.m.

6 ft.
(11:56)

0.3 ft.
(6:03)

1.1 ft.
(5:24)



FRI OCT 20

dawn 6:26 sunrise 7:23 sunset 6:25 dark 7:22
moonrise 8:08 a.m. moonset 7:24 p.m.

feet 5.2 ft.
6 (12:39)

5.9 ft.
(12:26)

1.5 ft.
(6:01)

0.2 ft.
(6:41)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
ood → 3.2 knots ebb → 2.8 knots flood → 3.8 knots ebb → 2.9 knots ebb
2 knots flood → 1.9 knots ebb → 2.6 knots flood → 2.7 knots ebb →

SAT OCT 21

dawn 6:27 sunrise 7:24 sunset 6:24 dark 7:21
moonrise 9:05 a.m. moonset 7:58 p.m.

Orionids Meteors Peak

feet 5 ft.
6 (1:25)

5.8 ft.
(12:55)

1.9 ft.
(6:37)

0.1 ft.
(7:18)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
nts flood → 2.9 knots ebb → 2.5 knots flood → 3.6 knots ebb → 2.7 knots ebb
- 2.1 knots flood → 1.7 knots ebb → 2.5 knots flood → 2.6 knots ebb →

SUN OCT 22

dawn 6:28 sunrise 7:25 sunset 6:23 dark 7:20
moonrise 10:02 a.m. moonset 8:36 p.m.

feet 4.8 ft.
6 (2:12)

5.7 ft.
(1:25)

2.3 ft.
(7:14)

0.1 ft.
(7:55)

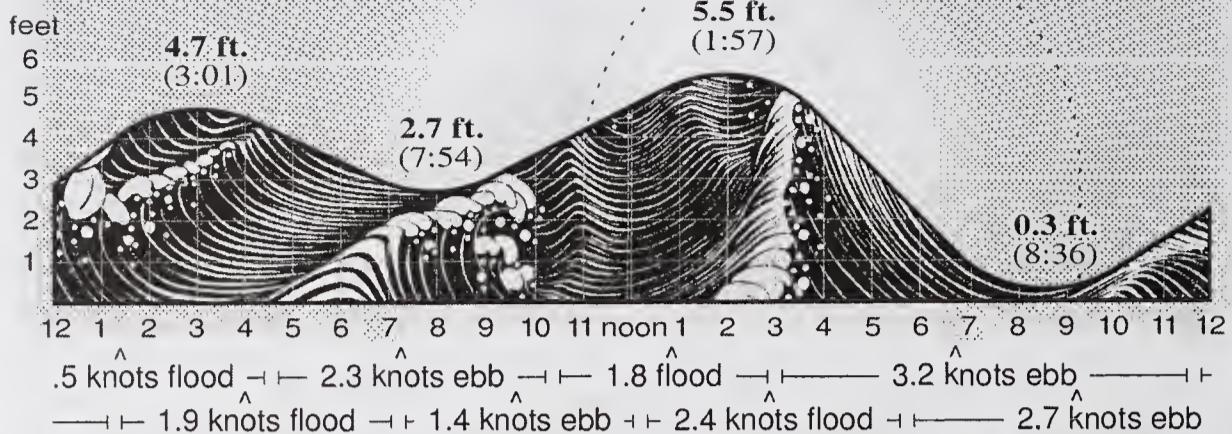
12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
knots flood → 2.6 knots ebb → 2.2 knots flood → 3.4 knots ebb → 2.7 knots ebb
- 2 knots flood → 1.5 knots ebb → 2.5 knots flood → 2.7 knots ebb →



Orionids Meteor Shower The Orionids run annually from October 2nd to November 7th. This year the peak falls on the night of October 21st and the morning of 22nd. The Orionids are believed to be remnants of Comet Halley. At zenith, the Orionids can produce up to 20 meteors per hours. The Orionids' radiant point is the constellation Orion. By early evening on the 21st, Orion with its distinctive belt of stars will have risen above the eastern horizon. The early setting Moon should provide a dark sky for viewing the Orionids meteor shower this year.

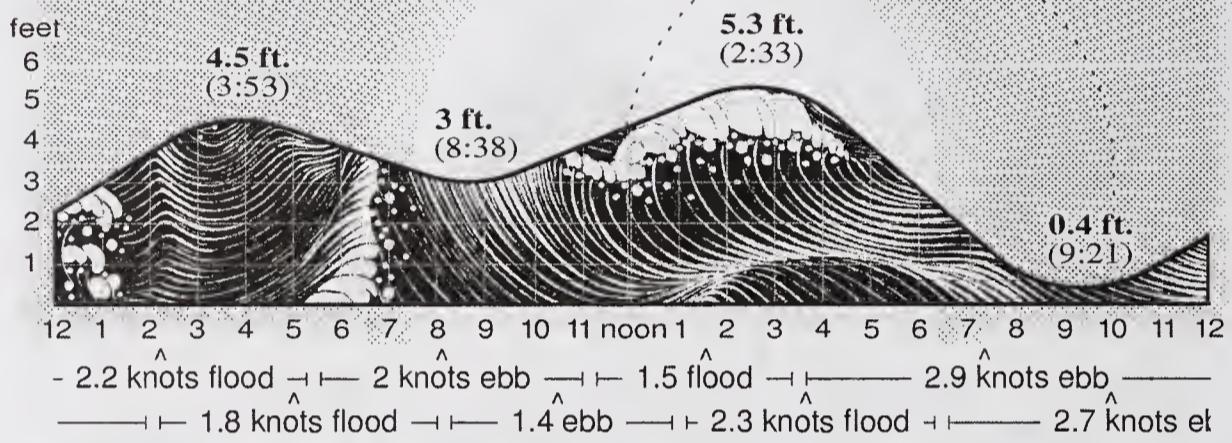
MON OCT 23

dawn 6:29 sunrise 7:26 sunset 6:21 dark 7:19
moonrise 10:57 a.m. moonset 9:16 p.m.



TUE OCT 24

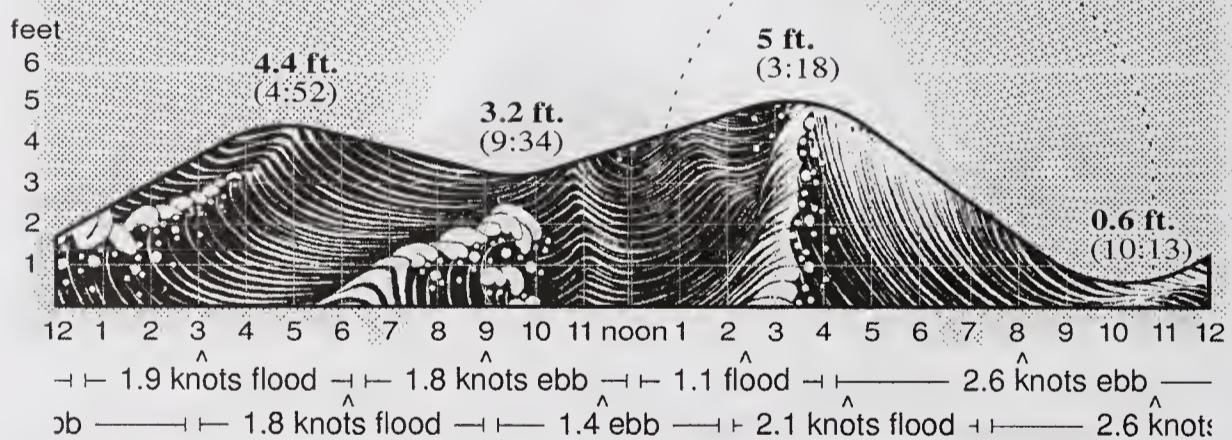
dawn 6:30 sunrise 7:27 sunset 6:20 dark 7:18
moonrise 11:49 a.m. moonset 10:00 p.m.



WED OCT 25

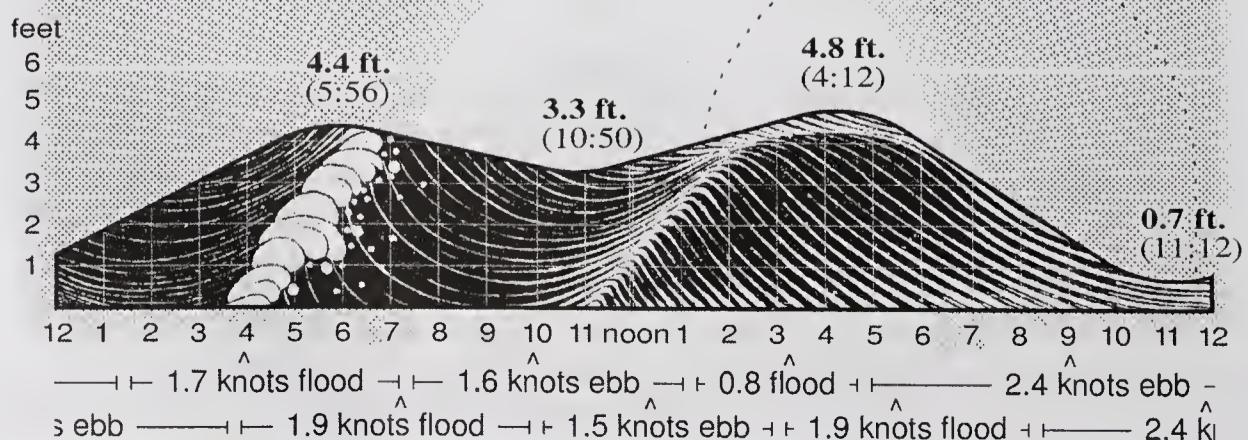
dawn 6:31 sunrise 7:28 sunset 6:19 dark 7:16
moonrise 12:38 p.m. moonset 10:48 p.m.

South



THU OCT 26

dawn 6:32 sunrise 7:30 sunset 6:18 dark 7:15
moonrise 1:24 p.m. moonset 11:39 p.m.



FRI OCT 27

dawn 6:33 sunrise 7:31 sunset 6:16 dark 7:14
moonrise 2:06 p.m.

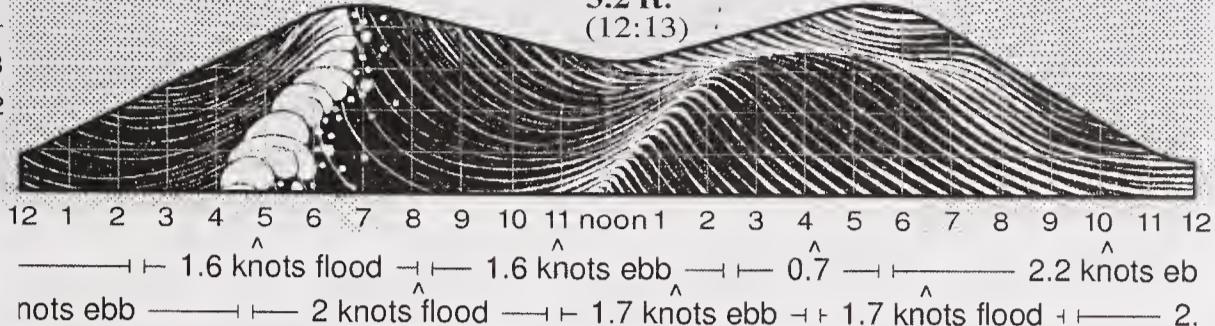


feet

6
5
4
3
2
1

4.5 ft.
(6:58)

4.6 ft.
(5:19)



SAT OCT 28

dawn 6:34 sunrise 7:32 sunset 6:15 dark 7:13
moonset 12:33 a.m. moonrise 2:46 p.m.



feet

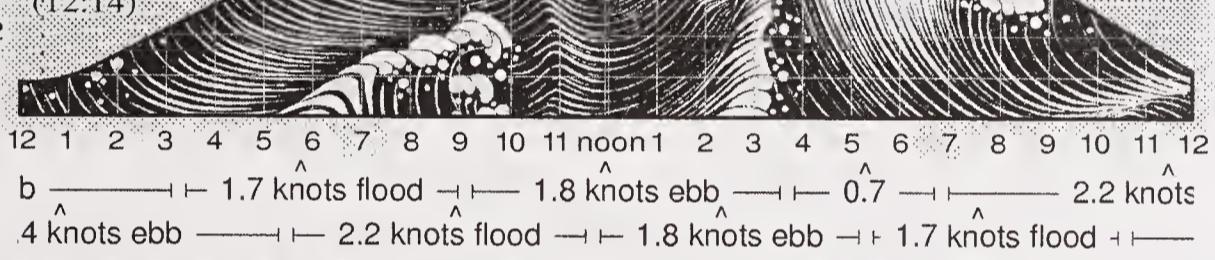
6
5
4
3
2
1

4.6 ft.
(7:50)

4.5 ft.
(6:31)

0.8 ft.
(12:14)

2.9 ft.
(1:21)



SUN OCT 29

dawn 6:35 sunrise 7:33 sunset 6:14 dark 7:12
moonset 1:30 a.m. moonrise 3:23 p.m.



feet

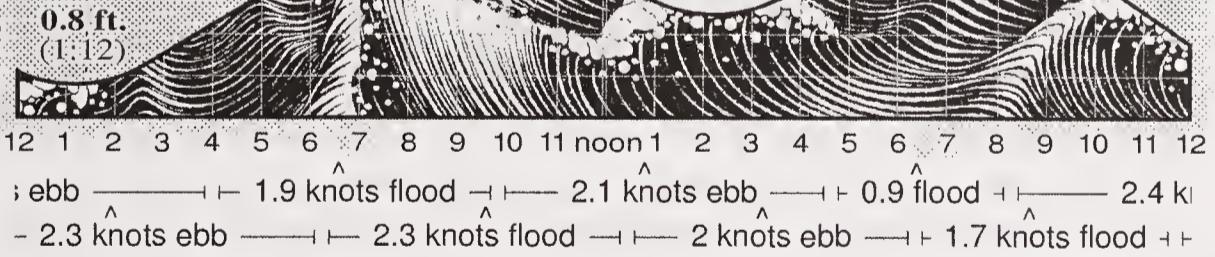
6
5
4
3
2
1

4.9 ft.
(8:30)

4.6 ft.
(7:40)

0.8 ft.
(1:12)

2.5 ft.
(2:13)



MON OCT 30

dawn 6:36 sunrise 7:34 sunset 6:13 dark 7:11
moonset 2:29 a.m. moonrise 3:58 p.m.

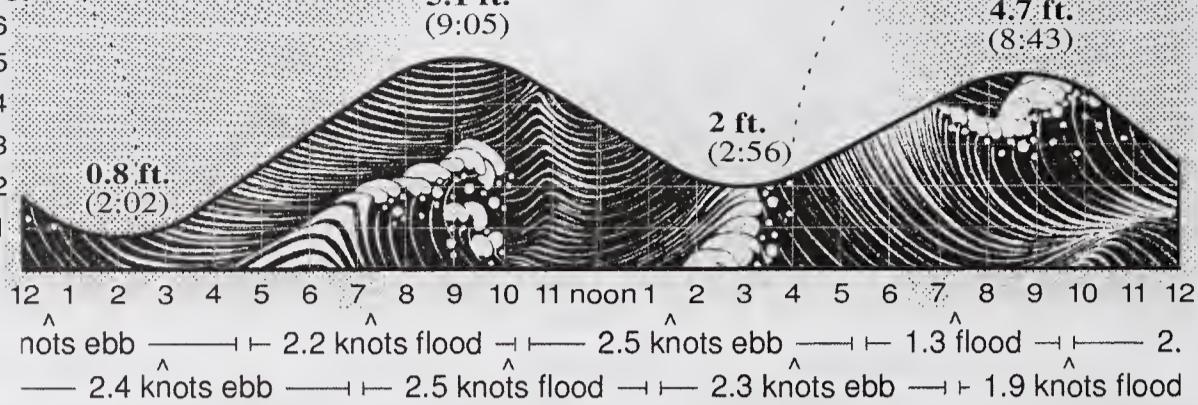


feet

5.1 ft.
(9:05)

4.7 ft.
(8:43)

0.8 ft.
(2:02)



TUE OCT 31

dawn 6:36 sunrise 7:35 sunset 6:12 dark 7:10
moonset 3:31 a.m. moonrise 4:32 p.m.

Halloween



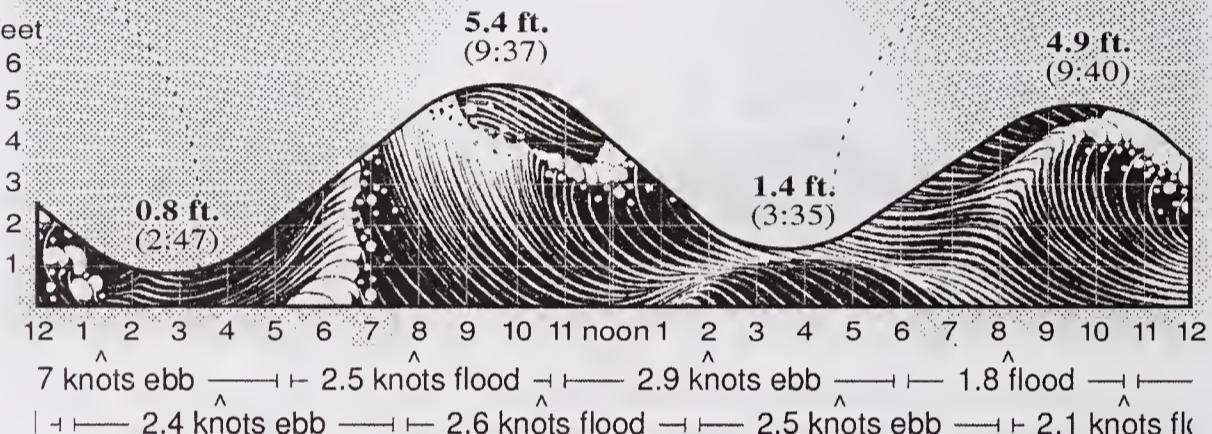
feet

5.4 ft.
(9:37)

4.9 ft.
(9:40)

0.8 ft.
(2:47)

1.4 ft.
(3:35)



WED NOV 1

dawn 6:37 sunrise 7:36 sunset 6:11 dark 7:09
moonset 4:35 a.m. moonrise 5:06 p.m.

equator



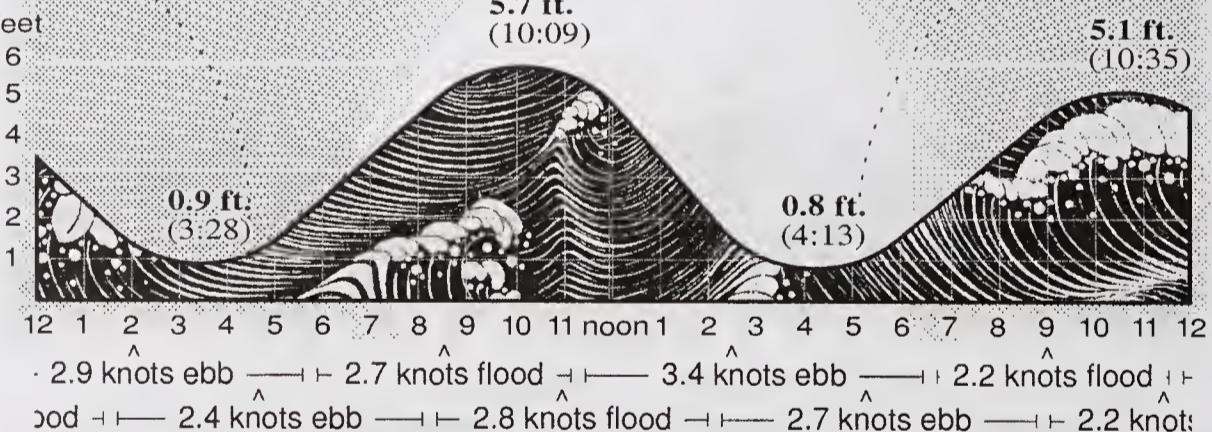
feet

5.7 ft.
(10:09)

5.1 ft.
(10:35)

0.9 ft.
(3:28)

0.8 ft.
(4:13)



THU NOV 2

dawn 6:38 sunrise 7:37 sunset 6:10 dark 7:08
moonset 5:41 a.m. moonrise 5:42 p.m.



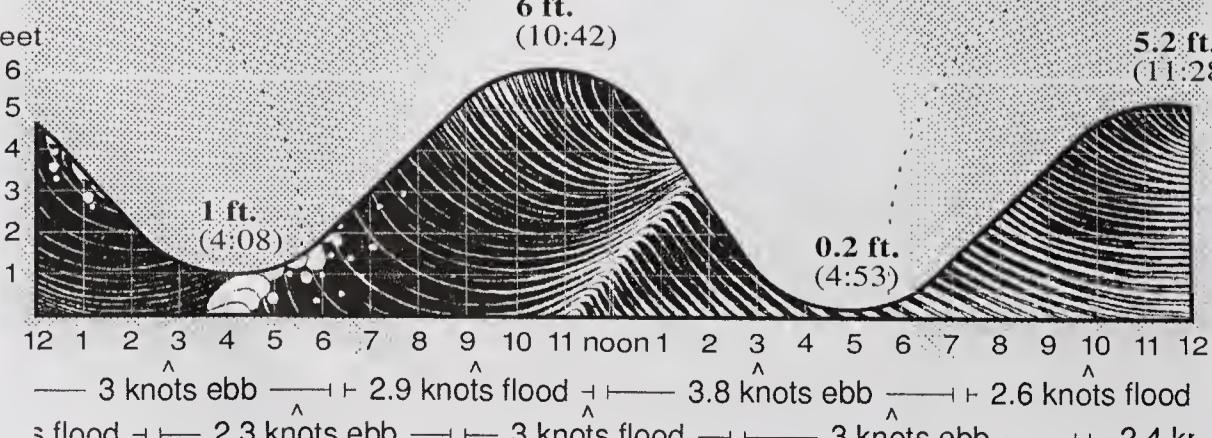
feet

6 ft.
(10:42)

5.2 ft.
(11:28)

1 ft.
(4:08)

0.2 ft.
(4:53)

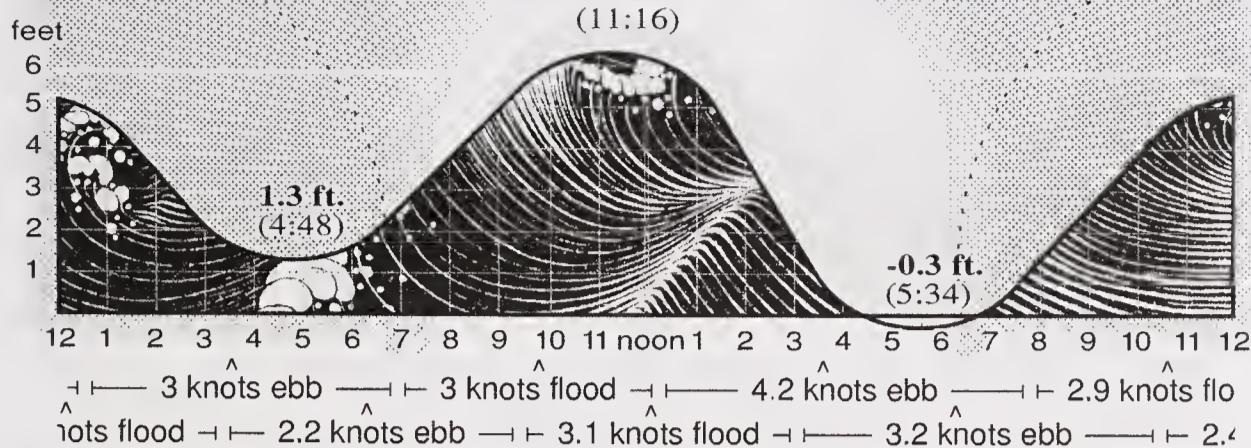


FRI NOV 3

dawn 6:39 sunrise 7:38 sunset 6:09 dark 7:07
moonset 6:49 a.m. moonrise 6:20 p.m.



Full Moon 10:23 p.m.

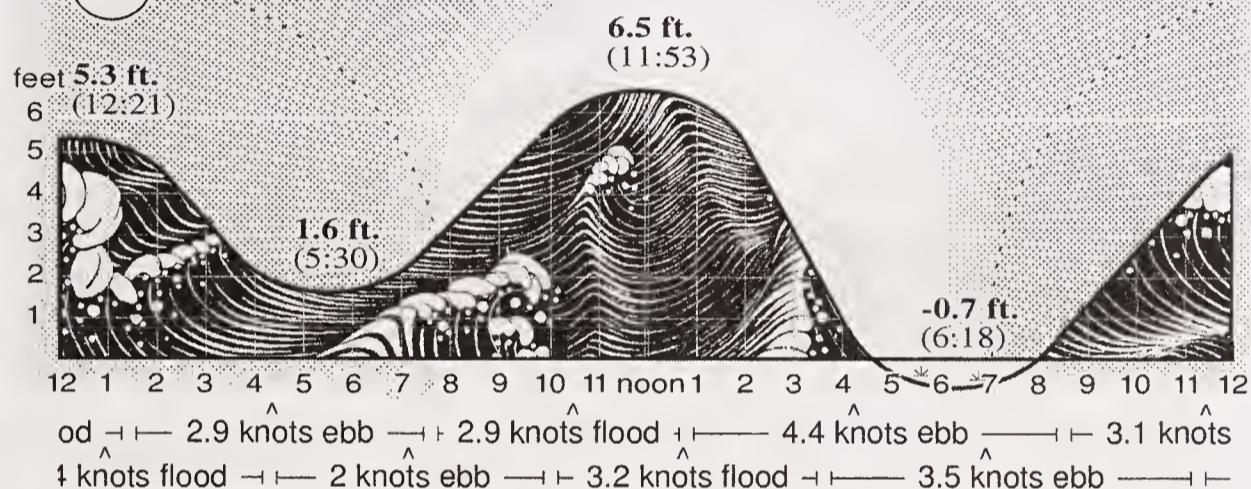


SAT NOV 4

dawn 6:40 sunrise 7:39 sunset 6:08 dark 7:06
moonset 8:00 a.m. moonrise 7:03 p.m.



Taurids Meteors Peak

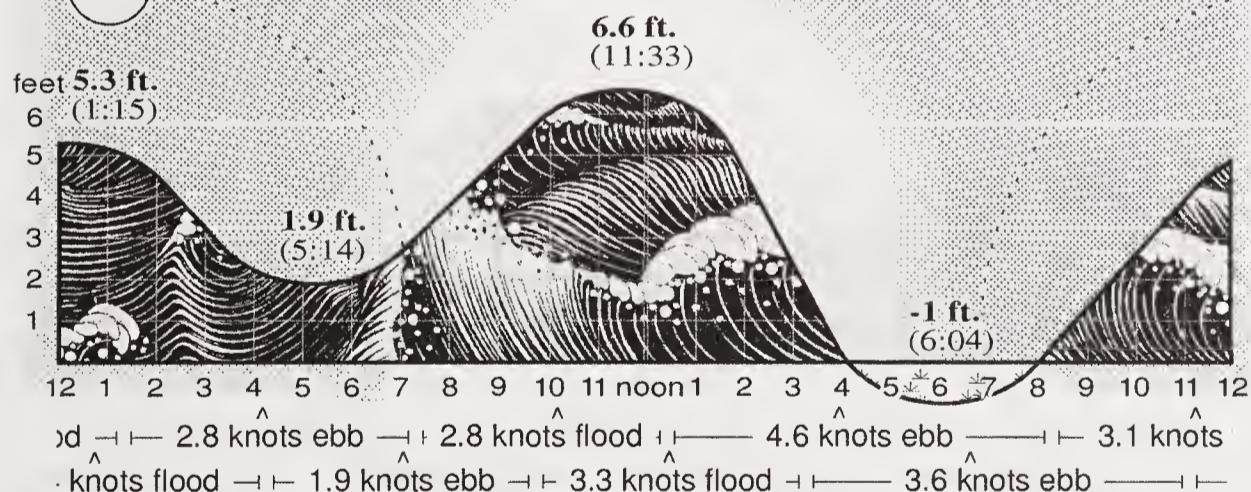


SUN NOV 5

dawn 5:41 sunrise 6:40 sunset 5:07 dark 6:05
moonset 8:11 a.m. moonrise 6:50 p.m.



Daylight Saving Time Ends



Taurids Meteor Shower The Taurids are a long running minor shower active from September 7th to December 10th. This year's peak falls on the night of November 4th which unfortunately coincides with the Hunter's Full moon. The Hunter's moon's glare will block out all but the brightest Taurids. The Taurids's zenith rate is 5 to 10 meteors per hour and radiates from the constellation Taurus. The constellation Taurus can be located with the help of Orion, the Hunter. Locate Orion's distinctive belt of stars, then extend the line of Orion's belt to the northwest until you find Taurus' most prominent signpost - a "V"-shaped cluster of stars called the Hyades. The constellation Taurus includes the bright stars Aldebaran and Elnath and the Pleiades and Hyades star clusters.

MON NOV 6

dawn 5:42 sunrise 6:41 sunset 5:06 dark 6:04
moonset 9:20 a.m. moonrise 7:43 p.m.



feet 5.2 ft.

6 (1:11)

6.6 ft.
(12:16)

2.2 ft.
(6:01)

-1 ft.
(6:54)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
flood → ← 2.6 knots ebb → ← 2.7 knots flood → ← 4.6 knots ebb → ← 3 knots
2.4 knots flood → ← 1.8 knots ebb → ← 3.2 knots flood → ← 3.6 knots ebb → ←

TUE NOV 7

dawn 5:43 sunrise 6:42 sunset 5:05 dark 6:04
moonset 10:25 a.m. moonrise 8:42 p.m.



North

feet 5.1 ft.
(2:09)

6.4 ft.
(1:04)

2.6 ft.
(6:53)

-0.9 ft.
(7:48)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
↑ flood → ← 2.4 knots ebb → ← 2.4 knots flood → ← 4.5 knots ebb → ← 2.9
→ ← 2.3 knots flood → ← 1.8 knots ebb → ← 3.1 knots flood → ← 3.5 knots ebb → ←

WED NOV 8

dawn 5:44 sunrise 6:43 sunset 5:04 dark 6:03
moonset 11:24 a.m. moonrise 9:45 p.m.



feet 5 ft.
(3:12)

6.1 ft.
(1:59)

2.8 ft.
(7:55)

-0.6 ft.
(8:47)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
↑ knots flood → ← 2.2 knots ebb → ← 2.2 knots flood → ← 4.1 knots ebb → ←
→ ← 2.3 knots flood → ← 1.8 knots ebb → ← 2.8 knots flood → ← 3.2 knots ebb → ←

THU NOV 9

dawn 5:45 sunrise 6:44 sunset 5:03 dark 6:02
moonset 12:16 p.m. moonrise 10:49 p.m.



feet 5 ft.
(4:17)

5.6 ft.
(3:02)

2.9 ft.
(9:11)

-0.3 ft.
(9:51)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12
↑ 2.7 knots flood → ← 2.1 knots ebb → ← 1.9 knots flood → ← 3.7 knots ebb → ←
→ ← 2.3 knots flood → ← 1.9 knots ebb → ← 2.5 knots flood → ← 3 knots ebb → ←

FRI NOV 10

dawn 5:46 sunrise 6:45 sunset 5:02 dark 6:01
moonset 1:01 p.m. moonrise 11:54 p.m.



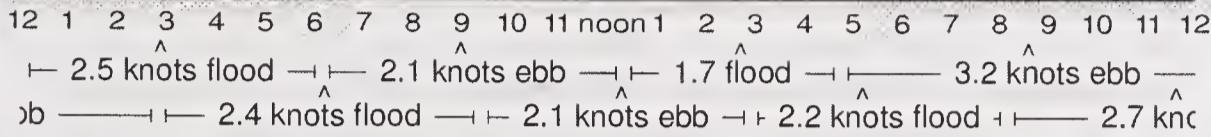
feet

5.1 ft.
(5:22)

5.2 ft.
(4:15)

2.8 ft.
(10:38)

0 ft.
(10:59)



SAT NOV 11

dawn 5:47 sunrise 6:46 sunset 5:01 dark 6:01
moonset 1:41 p.m.

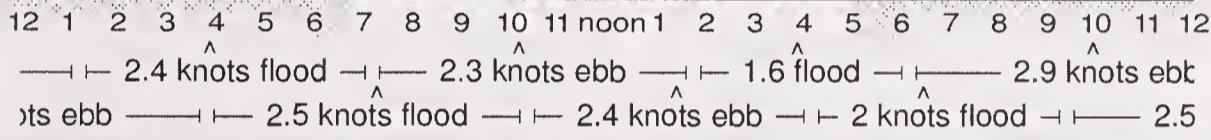
Veterans Day

feet

5.3 ft.
(6:22)

4.9 ft.
(5:34)

2.4 ft.
(11:58)



SUN NOV 12

dawn 5:48 sunrise 6:47 sunset 5:00 dark 6:00
moonrise 12:58 a.m. moonset 2:17 p.m.



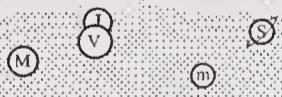
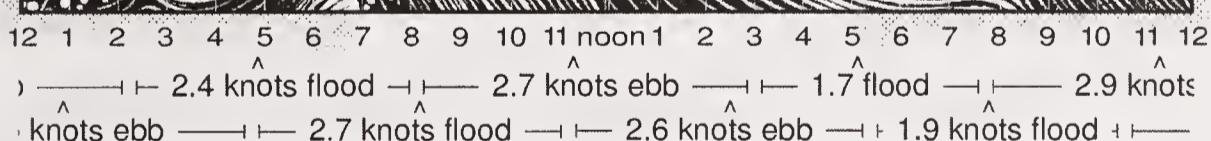
feet

5.6 ft.
(7:14)

4.8 ft.
(6:53)

0.3 ft.
(12:03)

1.8 ft.
(1:06)



Conjunction of Venus and Jupiter On November 13th, Venus and Jupiter will be just one-third of a degree apart as seen from our perspective. This phenomenon is called a conjunction. The planets will be visible in the eastern sky just before sunrise.

MON NOV 13

dawn 5:49 sunrise 6:48 sunset 5:00 dark 5:59
moonrise 2:00 a.m. moonset 2:50 p.m.

Venus & Jupiter Conjunction



5.8 ft.
(7:59)

feet



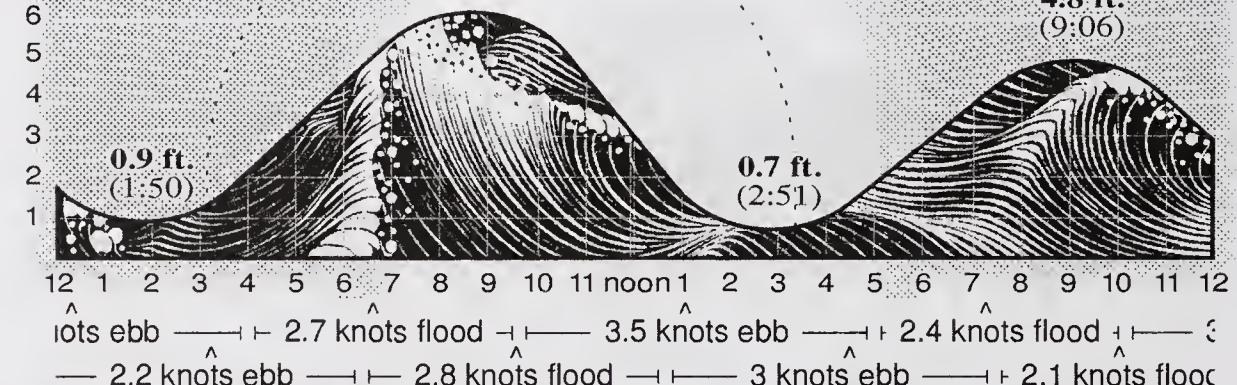
TUE NOV 14

dawn 5:50 sunrise 6:49 sunset 4:59 dark 5:59
moonrise 3:01 a.m. moonset 3:21 p.m.

equator

6 ft.
(8:39)

feet



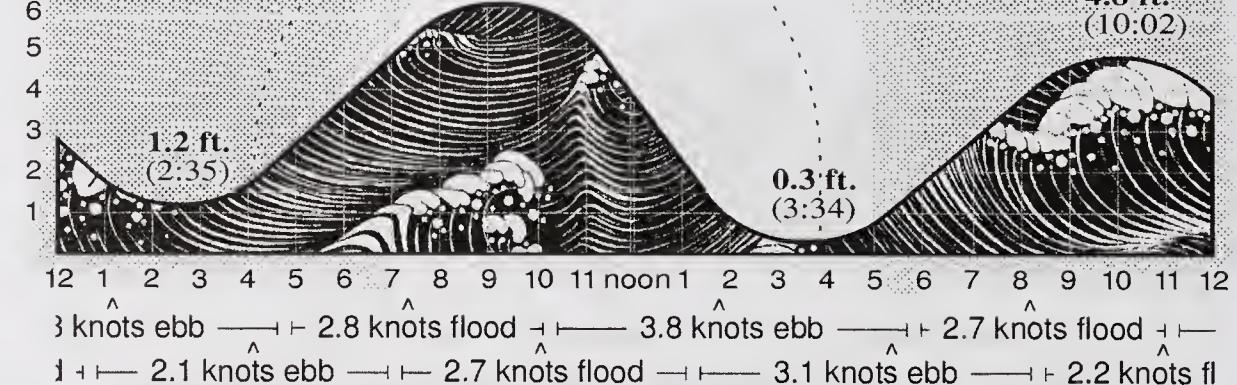
WED NOV 15

dawn 5:51 sunrise 6:51 sunset 4:58 dark 5:58
moonrise 4:01 a.m. moonset 3:52 p.m.



6.1 ft.
(9:14)

feet



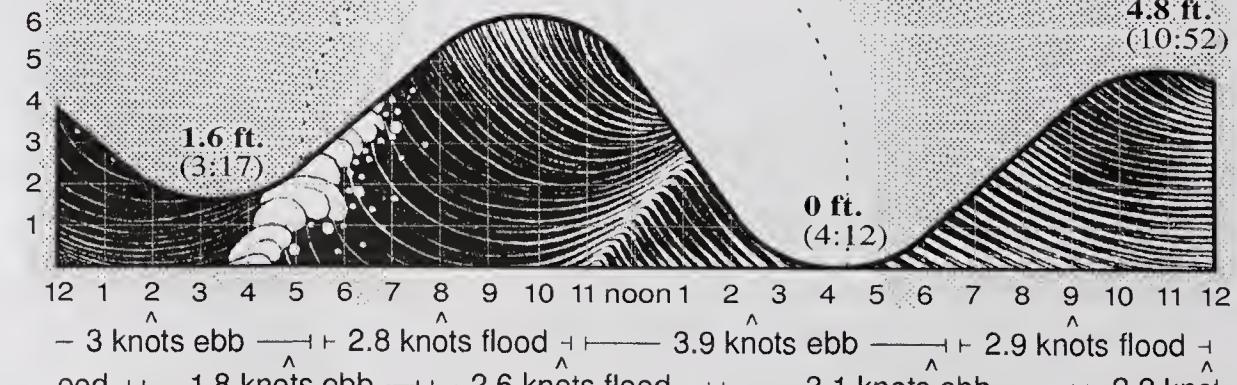
THU NOV 16

dawn 5:52 sunrise 6:52 sunset 4:58 dark 5:57
moonrise 4:59 a.m. moonset 4:24 p.m.



6.1 ft.
(9:47)

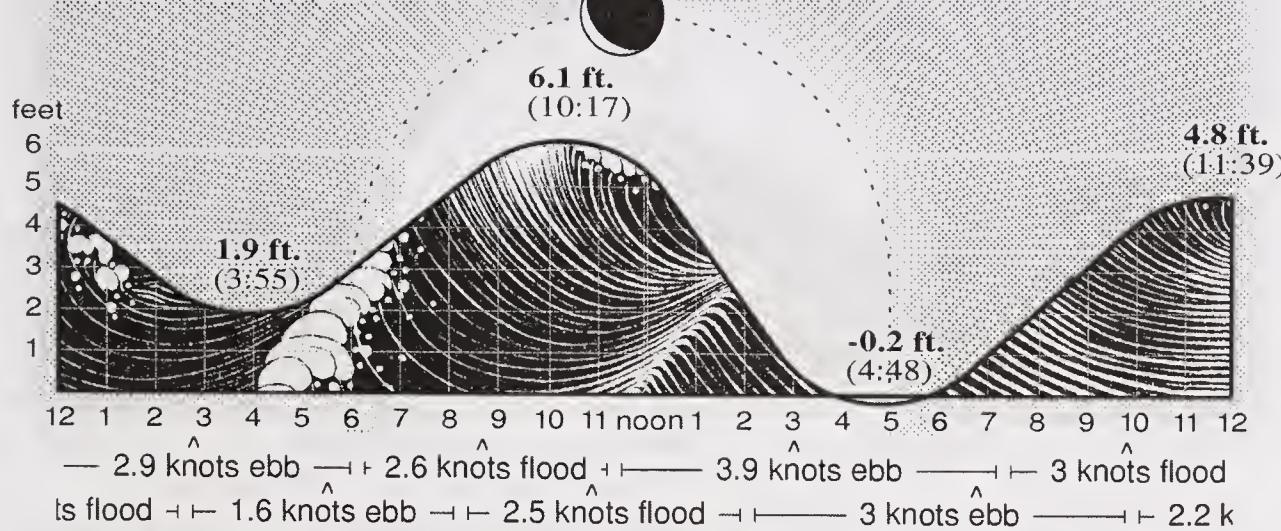
feet



FRI NOV 17

dawn 5:53 sunrise 6:53 sunset 4:57 dark 5:57
moonrise 5:57 a.m. moonset 4:58 p.m.

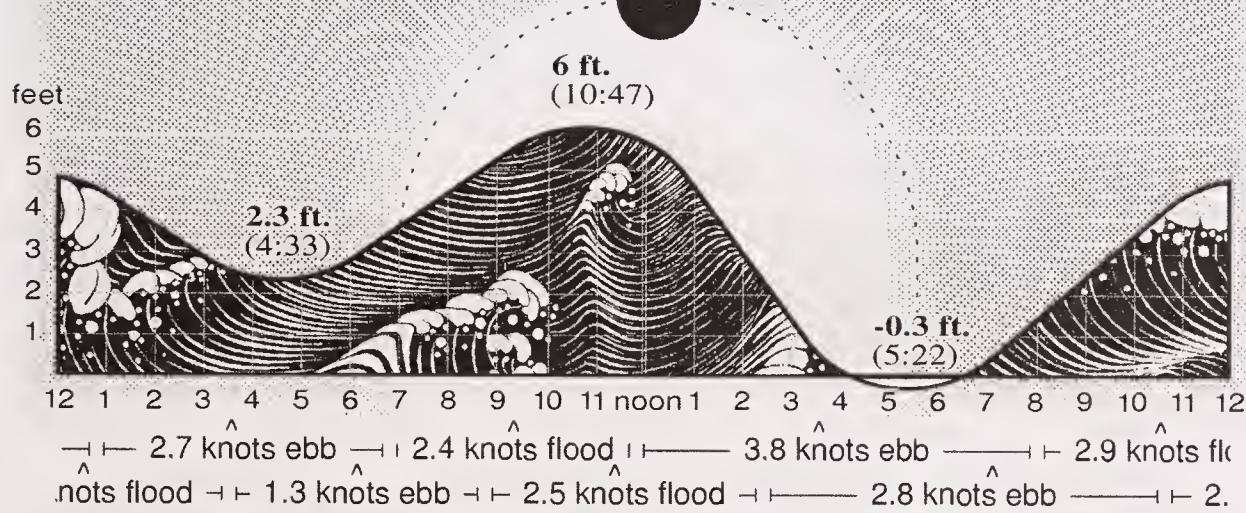
Leonids Meteors Peak



SAT NOV 18

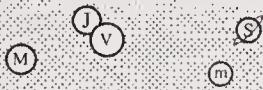
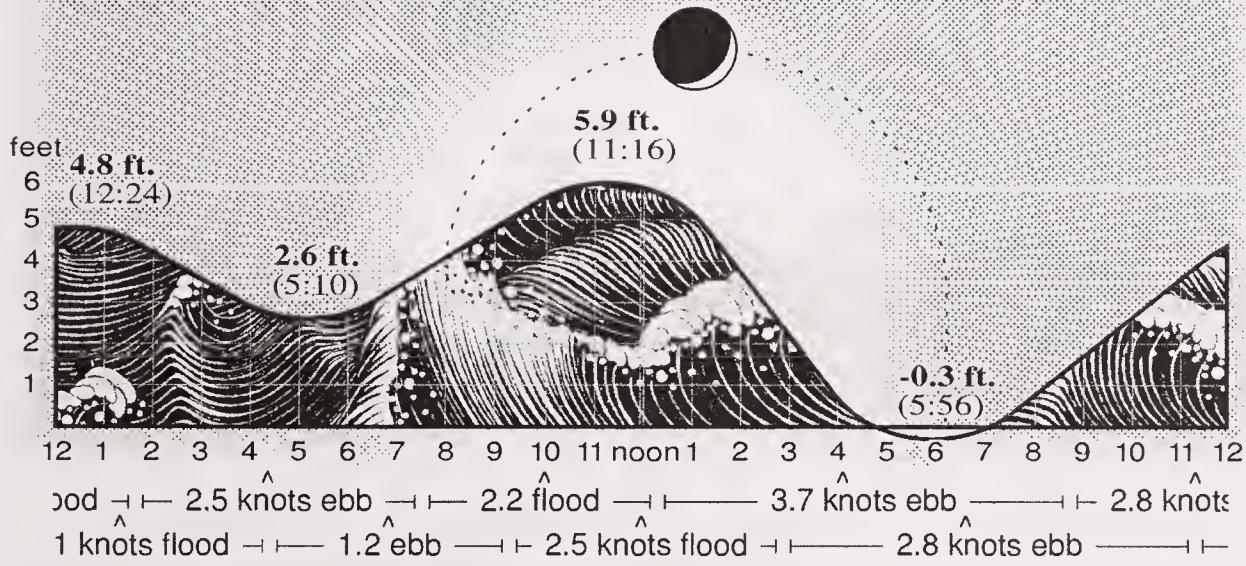
dawn 5:54 sunrise 6:54 sunset 4:56 dark 5:56
moonrise 6:54 a.m. moonset 5:34 p.m.

New Moon 3:42 a.m.



SUN NOV 19

dawn 5:55 sunrise 6:55 sunset 4:56 dark 5:56
moonrise 7:49 a.m. moonset 6:13 p.m.



Leonids Meteor Shower The Leonids run from November 6th through 30th. This year's peak could produce up to 15 meteors per hour, falls on the night and morning of 17th and 18th. The sky will be dark with the Moon in a new phase. The Leonids radiate from the constellation Leo. To locate Leo find the stars that forms the Big Dipper where the handle attaches to the Big Dipper's bowl. When you have those stars draw a line across the dipper side where the handle attaches and follow the line in the direction away from Polaris, the North Star, till you locate Leo's Sickle and the constellation's brightest star Regulus at the base of the Sickle.

MON NOV 20

dawn 5:56 sunrise 6:56 sunset 4:55 dark 5:55
moonrise 8:43 a.m. moonset 6:55 p.m.



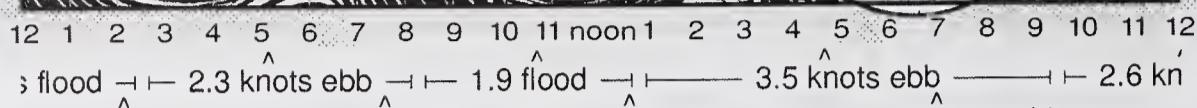
feet

6 4.7 ft.
(1:08)

2.8 ft.
(5:47)

5.8 ft.
(11:46)

-0.3 ft.
(6:31)



TUE NOV 21

dawn 5:56 sunrise 6:57 sunset 4:55 dark 5:55
moonrise 9:34 a.m. moonset 7:41 p.m.



apogee South

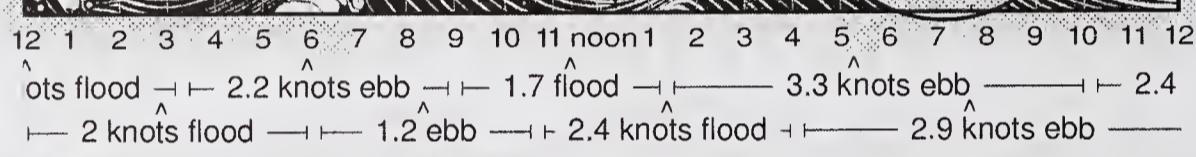
feet

6 4.7 ft.
(1:51)

3 ft.
(6:26)

5.6 ft.
(12:19)

-0.2 ft.
(7:07)



WED NOV 22

dawn 5:57 sunrise 6:58 sunset 4:54 dark 5:55
moonrise 10:21 a.m. moonset 8:31 p.m.



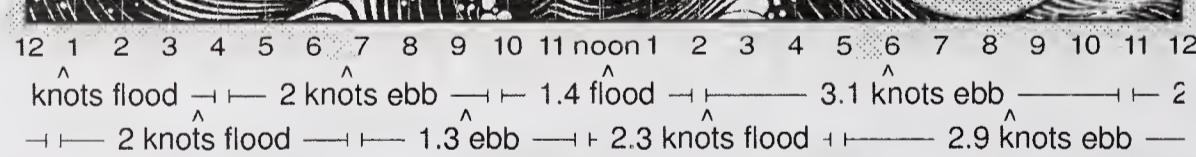
feet

6 4.6 ft.
(2:35)

3.2 ft.
(7:09)

5.4 ft.
(12:56)

0 ft.
(7:47)



THU NOV 23

dawn 5:58 sunrise 6:59 sunset 4:54 dark 5:54
moonrise 11:04 a.m. moonset 9:24 p.m.

Thanksgiving Day



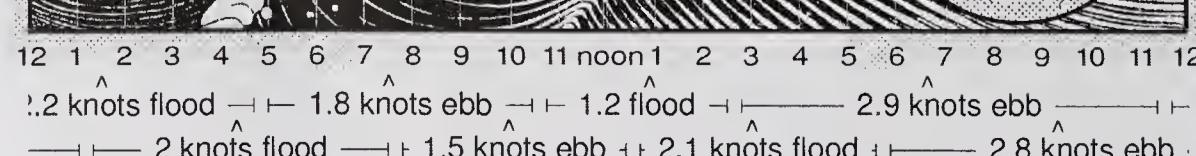
feet

6 4.6 ft.
(3:22)

3.3 ft.
(8:00)

5.1 ft.
(1:38)

0.2 ft.
(8:31)



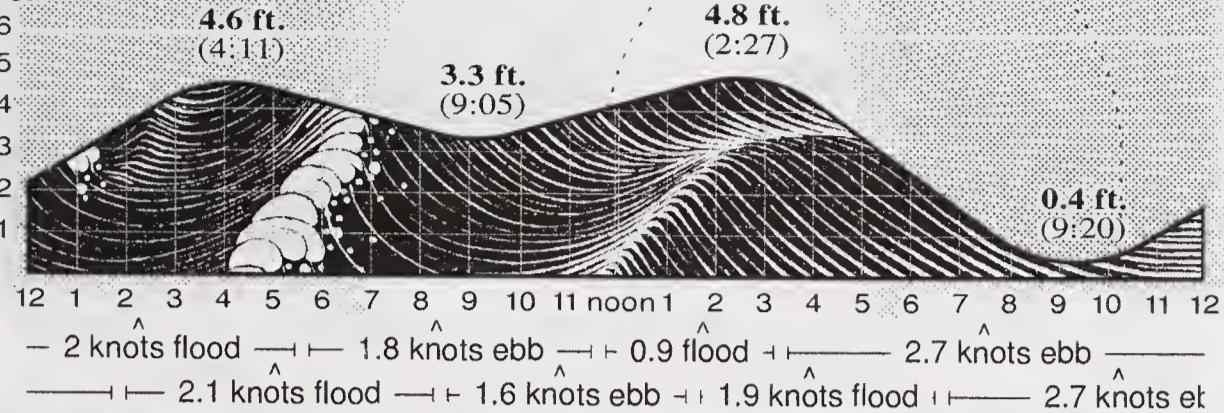
FRI NOV 24

dawn 5:59 sunrise 7:00 sunset 4:53 dark 5:54
moonrise 11:44 a.m. moonset 10:19 p.m.

Mercury Eastern Elongation



feet

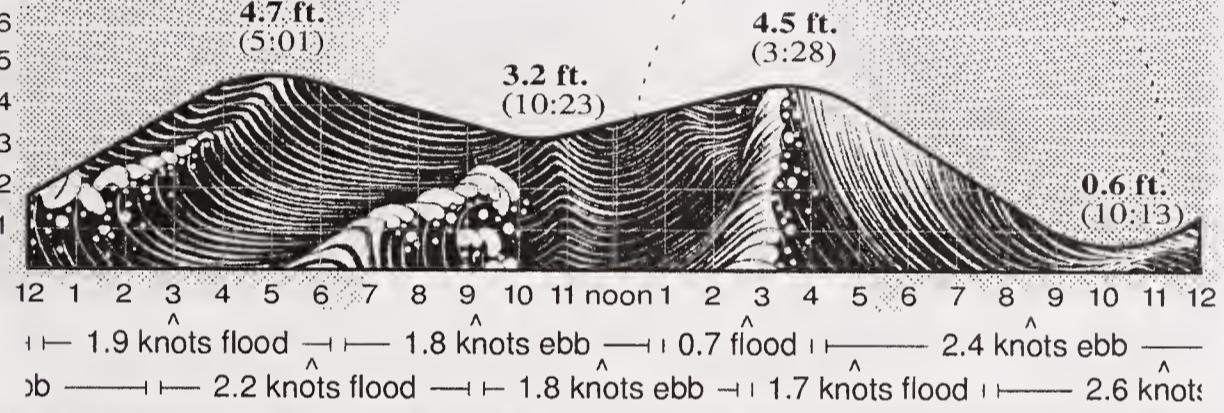


SAT NOV 25

dawn 6:00 sunrise 7:01 sunset 4:53 dark 5:54
moonrise 12:21 p.m. moonset 11:16 p.m.



feet

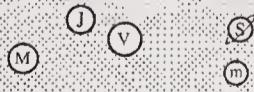
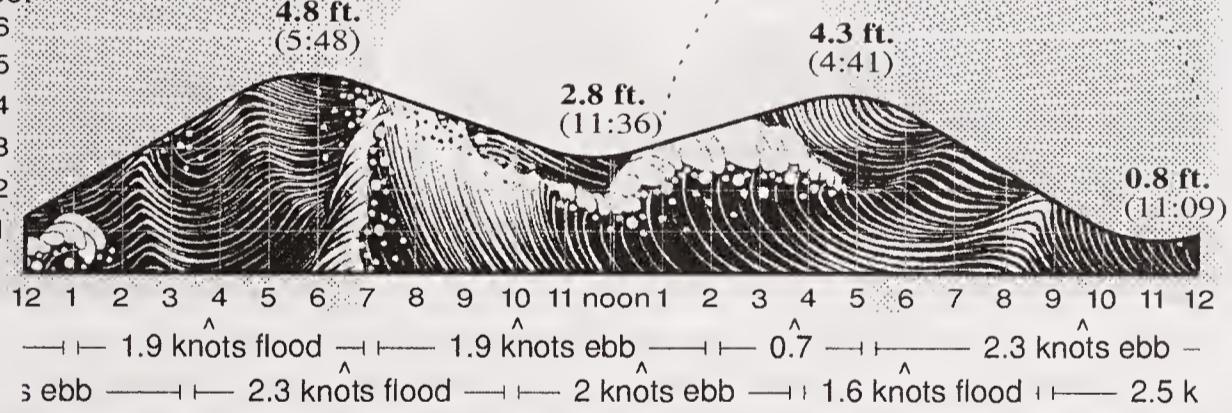


SUN NOV 26

dawn 6:01 sunrise 7:02 sunset 4:52 dark 5:53
moonrise 12:56 p.m.



feet



MON NOV 27

dawn 6:02 sunrise 7:03 sunset 4:52 dark 5:53
moonset 12:15 a.m. moonrise 1:29 p.m.

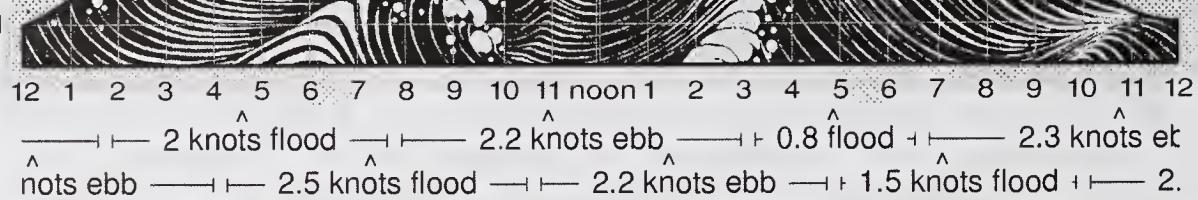


feet

5.1 ft.
(6:30)

4.2 ft.
(6:00)

2.3 ft.
(12:35)



TUE NOV 28

dawn 6:03 sunrise 7:04 sunset 4:52 dark 5:53
moonset 1:16 a.m. moonrise 2:02 p.m.



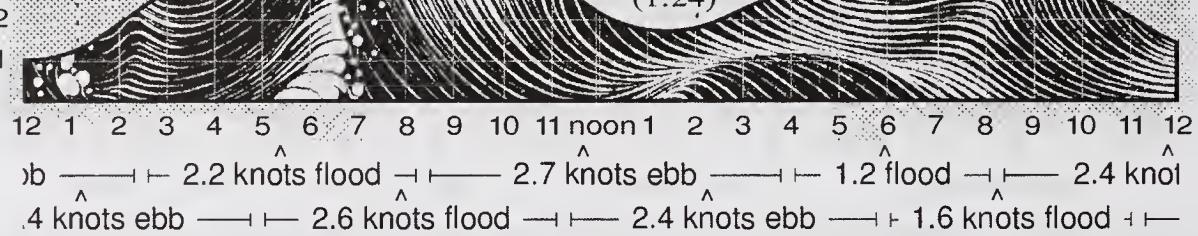
feet

5.4 ft.
(7:09)

4.2 ft.
(7:16)

1 ft.
(12:04)

1.7 ft.
(1:24)



WED NOV 29

dawn 6:04 sunrise 7:05 sunset 4:52 dark 5:53
moonset 2:19 a.m. moonrise 2:36 p.m.



equator

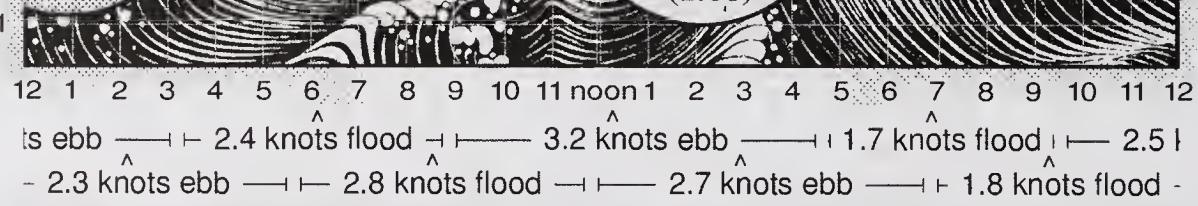
feet

5.7 ft.
(7:46)

4.4 ft.
(8:24)

1.2 ft.
(12:55)

1 ft.
(2:08)



THU NOV 30

dawn 6:05 sunrise 7:06 sunset 4:51 dark 5:53
moonset 3:25 a.m. moonrise 3:12 p.m.



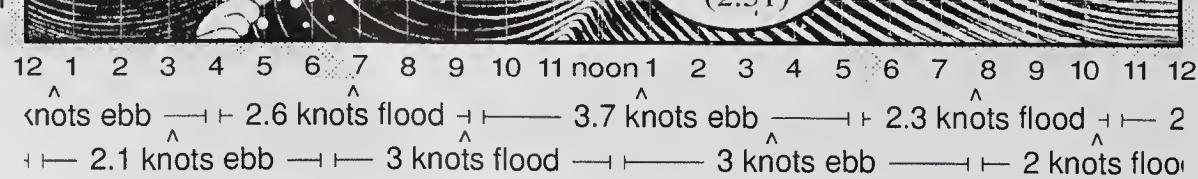
feet

6.1 ft.
(8:23)

4.7 ft.
(9:26)

1.4 ft.
(1:43)

0.3 ft.
(2:51)



FRI DEC 1

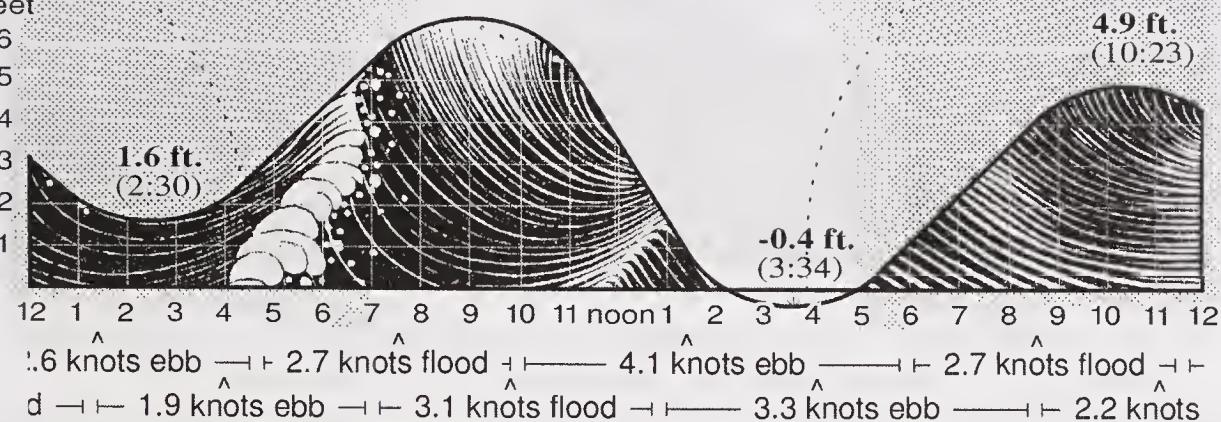
dawn 6:05 sunrise 7:07 sunset 4:51 dark 5:53
moonset 4:34 a.m. moonrise 3:52 p.m.



feet

6.5 ft.
(9:01)

4.9 ft.
(10:23)



SAT DEC 2

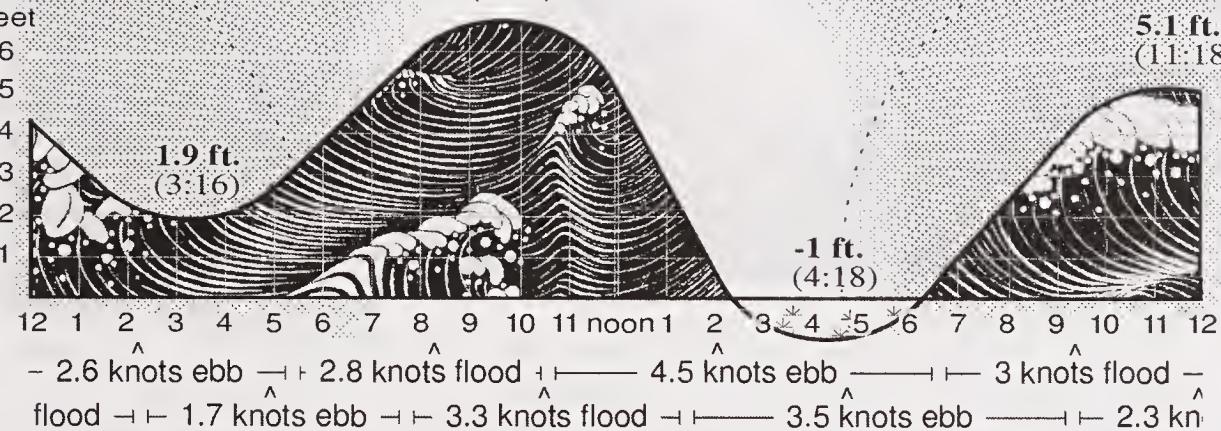
dawn 6:06 sunrise 7:08 sunset 4:51 dark 5:52
moonset 5:45 a.m. moonrise 4:36 p.m.



feet

6.7 ft.
(9:41)

5.1 ft.
(11:18)



SUN DEC 3

dawn 6:07 sunrise 7:09 sunset 4:51 dark 5:52
moonset 6:56 a.m. moonrise 5:27 p.m.

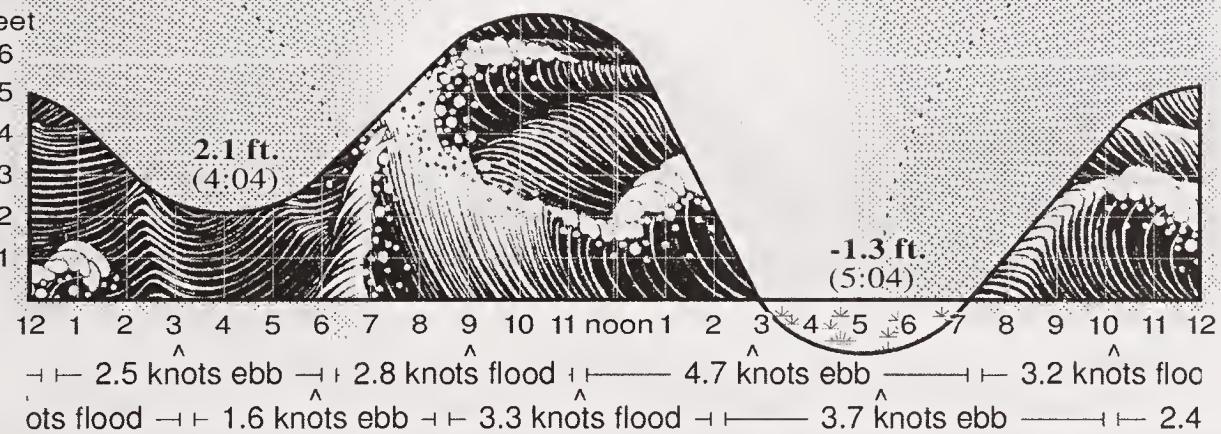
Full Moon 7:47 a.m.



feet

6.9 ft.
(10:23)

-1.3 ft.
(5:04)



(J) (V) (S)
(M) (N)

Super Moon On December 3rd the Full Moon will approach Earth at a distance of 357,982.59 kilometers some 7% closer than the Moon's mean orbit distance of 384,400 Kilometers. The fact the Moon will be closer can make it appear larger and brighter than normal especially at the horizon.

MON DEC 4

dawn 6:08 sunrise 7:10 sunset 4:51 dark 5:52

moonset 8:06 a.m. moonrise 6:25 p.m.



perigee

7 ft.
(11:08)

feet 5.2 ft.

6 (12:12)

5

4

3

2

1

noon

2.3 ft.
(4:53)

-1.5 ft.
(5:51)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12

→ 2.5 knots ebb → 2.7 knots flood → 4.8 knots ebb → 3.3 knots f
knots flood → 1.6 knots ebb → 3.3 knots flood → 3.7 knots ebb →

TUE DEC 5

dawn 6:09 sunrise 7:11 sunset 4:51 dark 5:52

moonset 9:11 a.m. moonrise 7:28 p.m.

North

6.9 ft.
(11:55)

feet 5.3 ft.

6 (1:06)

5

4

3

2

1

2.5 ft.
(5:45)

-1.5 ft.
(6:41)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12

→ 2.4 knots ebb → 2.6 knots flood → 4.7 knots ebb → 3.2 kno
2.4 knots flood → 1.7 knots ebb → 3.2 knots flood → 3.7 knots ebb →

WED DEC 6

dawn 6:10 sunrise 7:11 sunset 4:51 dark 5:53

moonset 10:08 a.m. moonrise 8:35 p.m.



6.6 ft.
(12:47)

feet 5.3 ft.

(1:59)

6

5

4

3

2

1

2.6 ft.
(6:41)

-1.2 ft.
(7:32)

12 1 2 3 4 5 6 7 8 9 10 11 noon 1 2 3 4 5 6 7 8 9 10 11 12

→ 2.4 knots ebb → 2.5 knots flood → 4.5 knots ebb → 3.1 f
→ 2.5 knots flood → 1.8 knots ebb → 3 knots flood → 3.5 knots ebb →

THU DEC 7

dawn 6:10 sunrise 7:12 sunset 4:51 dark 5:53

moonset 10:58 a.m. moonrise 9:43 p.m.



6.1 ft.
(1:42)

feet 5.3 ft.

(2:54)

6

5

4

3

2

1

2.7 ft.
(7:45)

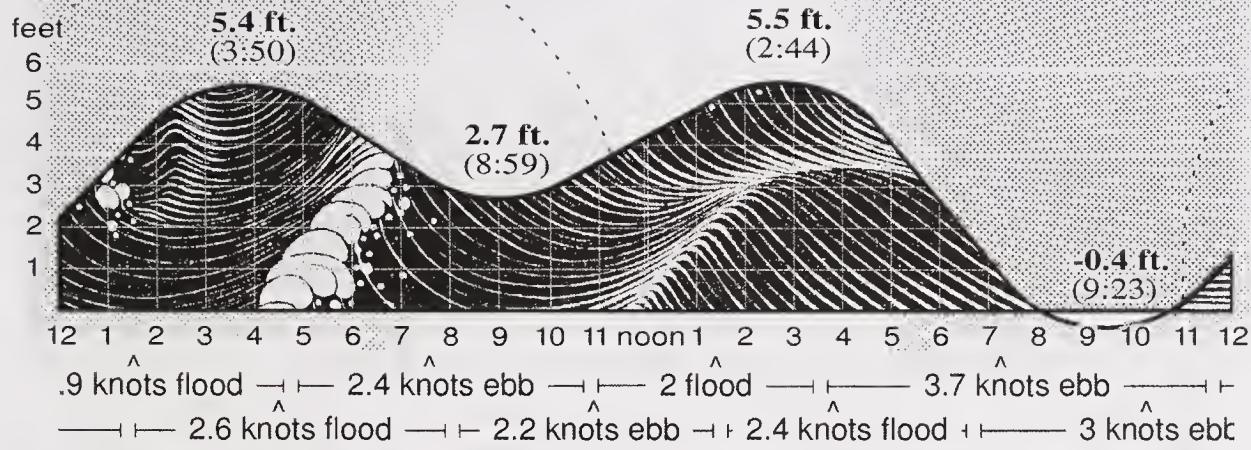
-0.8 ft.
(8:26)

12 1 2 3 4 5 6 7 8 9 10 11 12

→ 2.4 knots ebb → 2.3 flood → 4.1 knots ebb → 2
→ 2.5 knots flood → 2 knots ebb → 2.7 knots flood → 3.3 knots ebb →

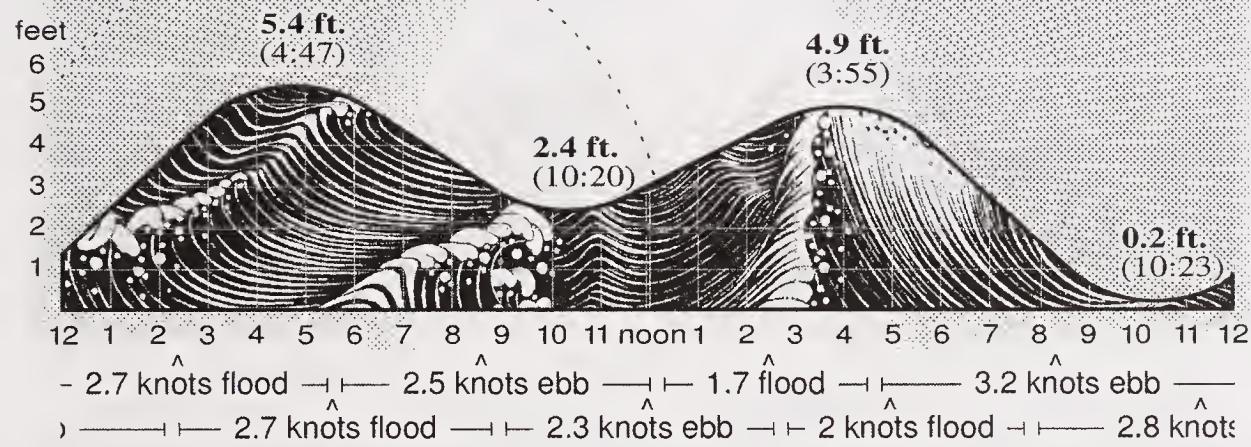
FRI DEC 8

dawn 6:11 sunrise 7:13 sunset 4:51 dark 5:53
moonset 11:41 a.m. moonrise 10:49 p.m.



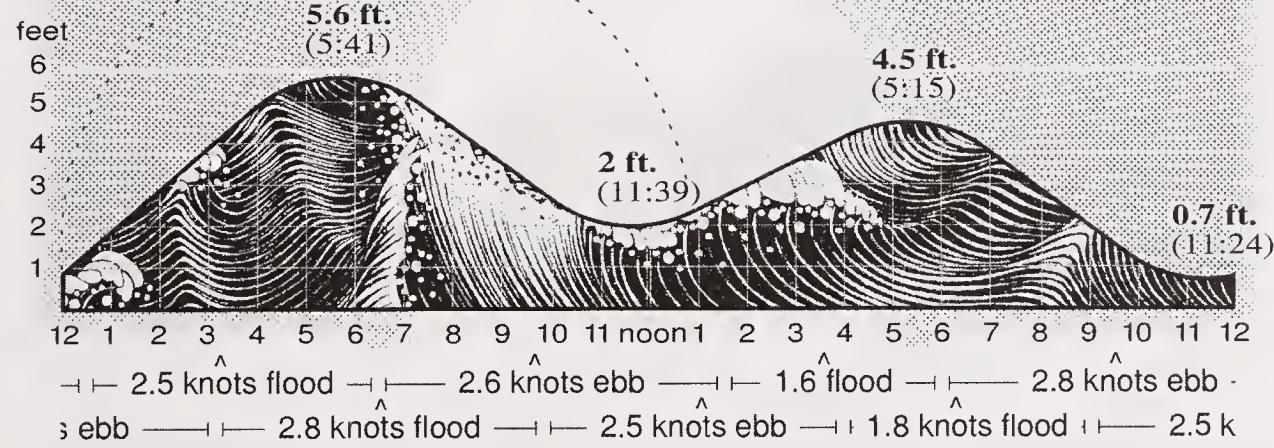
SAT DEC 9

dawn 6:12 sunrise 7:14 sunset 4:51 dark 5:53
moonset 12:19 p.m. moonrise 11:53 p.m.



SUN DEC 10

dawn 6:13 sunrise 7:15 sunset 4:51 dark 5:53
moonset 12:53 p.m.



J
M

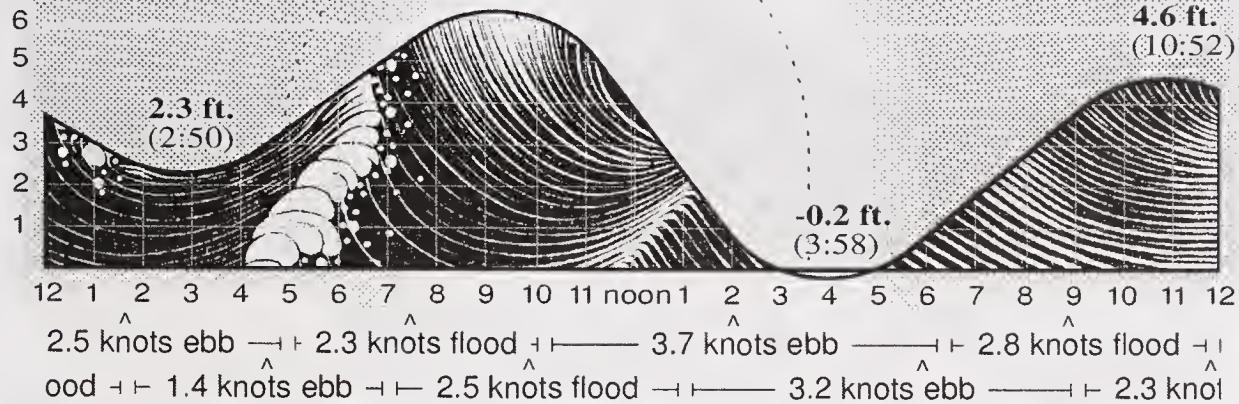
FRI DEC 15

dawn 6:16 sunrise 7:18 sunset 4:52 dark 5:54
moonrise 4:48 a.m. moonset 3:34 p.m.



6.2 ft.
(9:12)

feet



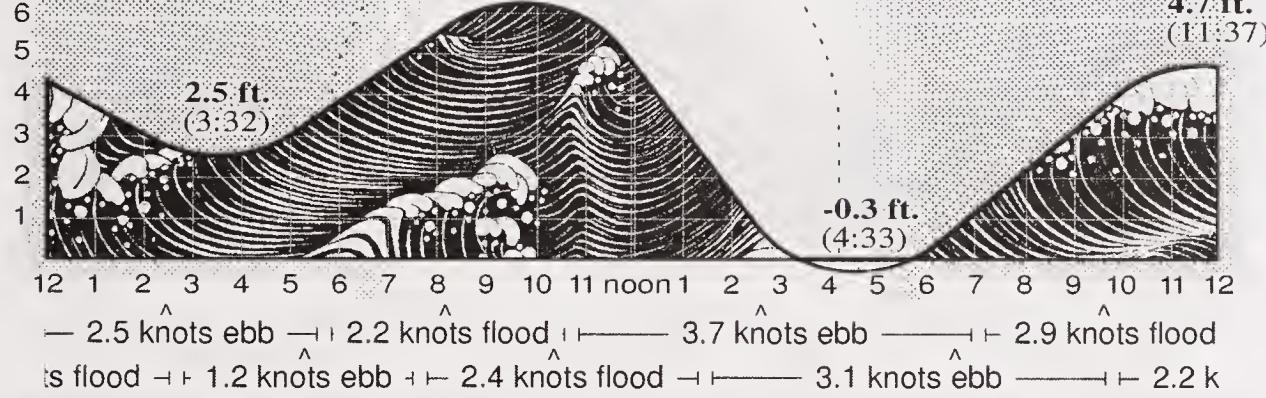
SAT DEC 16

dawn 6:17 sunrise 7:19 sunset 4:52 dark 5:55
moonrise 5:44 a.m. moonset 4:12 p.m.



6.2 ft.
(9:45)

feet



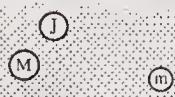
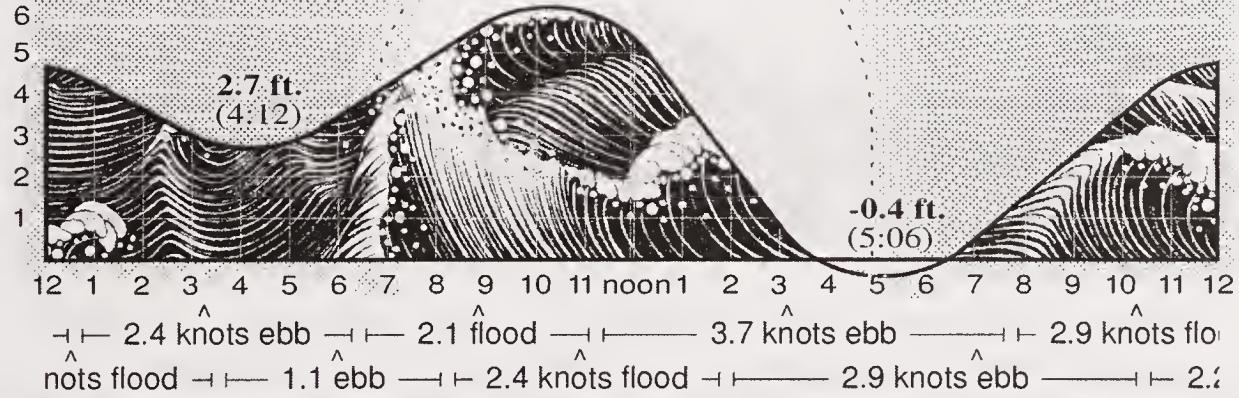
SUN DEC 17

dawn 6:17 sunrise 7:20 sunset 4:53 dark 5:55
moonrise 6:38 a.m. moonset 4:53 p.m.

New Moon 10:30 p.m.

6.1 ft.
(10:17)

feet

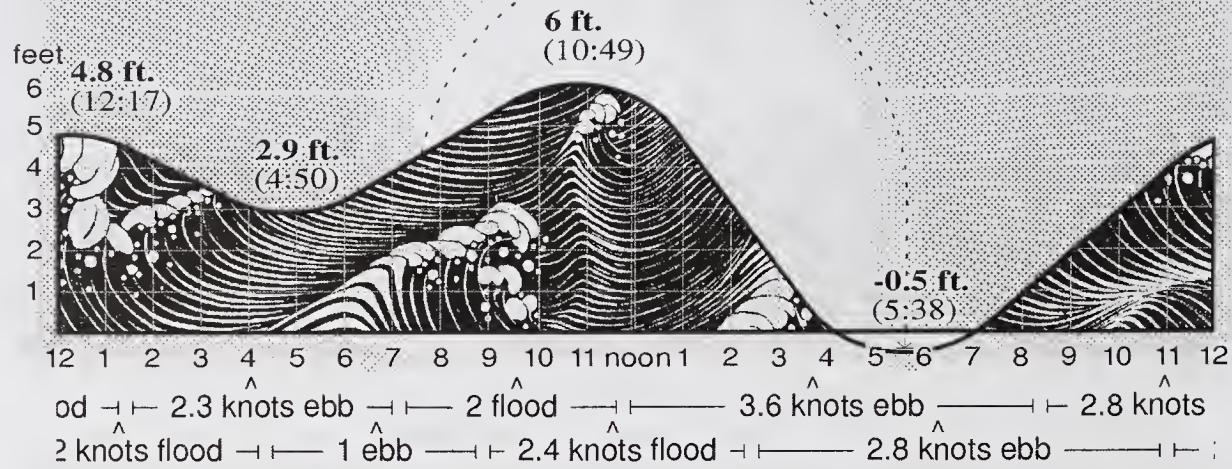


Geminids Meteor Shower The Geminids run from December 7th through the 17th. This year's peak is the night and morning of the 13th and 14th. The early setting waning crescent moon will not compete with the Geminids, considered one of the best showers with a peak of up to 120 multicolored meteors per hour. The Geminids' radiant point is its namesake constellation Gemini named for the two bright stars - Castor and Pollux. Locate Gemini by finding the Big Dipper. Then find the star where the handle attaches to the dipper bowl. This star is Megrez. Then draw an imaginary line diagonally from Megrez to Merak, the star that forms the bottom of the dipper on the opposite side of dipper bowl. Follow the line to Gemini's two bright stars, Castor and Pollux.

MON DEC 18

dawn 6:18 sunrise 7:20 sunset 4:53 dark 5:56
moonrise 7:30 a.m. moonset 5:38 p.m.

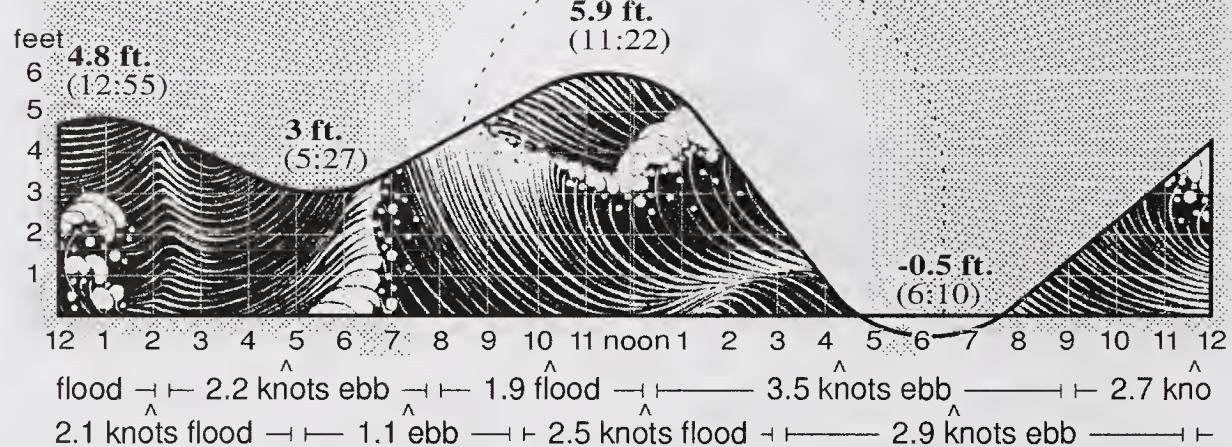
apogee



TUE DEC 19

dawn 6:18 sunrise 7:21 sunset 4:54 dark 5:56
moonrise 8:18 a.m. moonset 6:26 p.m.

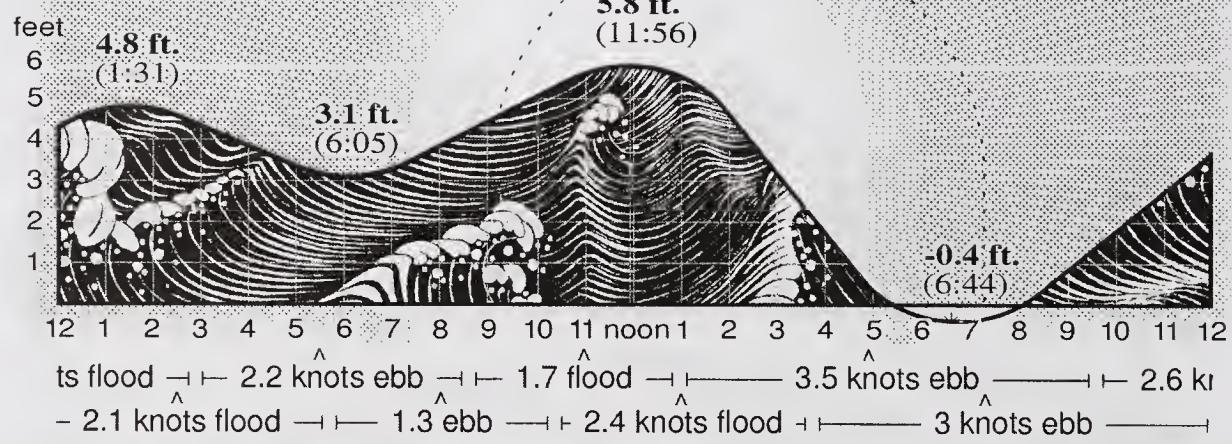
South



WED DEC 20

dawn 6:19 sunrise 7:21 sunset 4:54 dark 5:57
moonrise 9:03 a.m. moonset 7:18 p.m.

5.8 ft. (11:56)

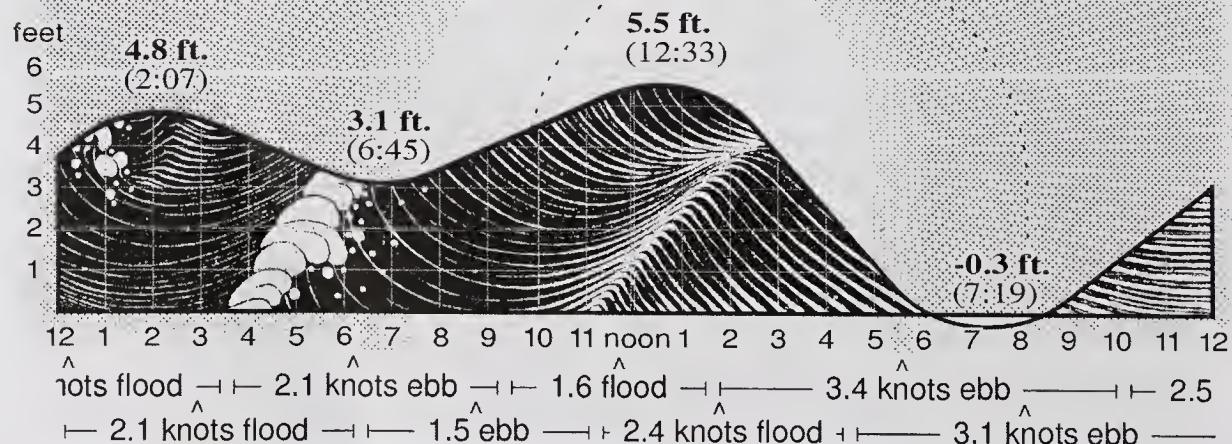


THU DEC 21

dawn 6:19 sunrise 7:22 sunset 4:55 dark 5:57
moonrise 9:45 a.m. moonset 8:12 p.m.

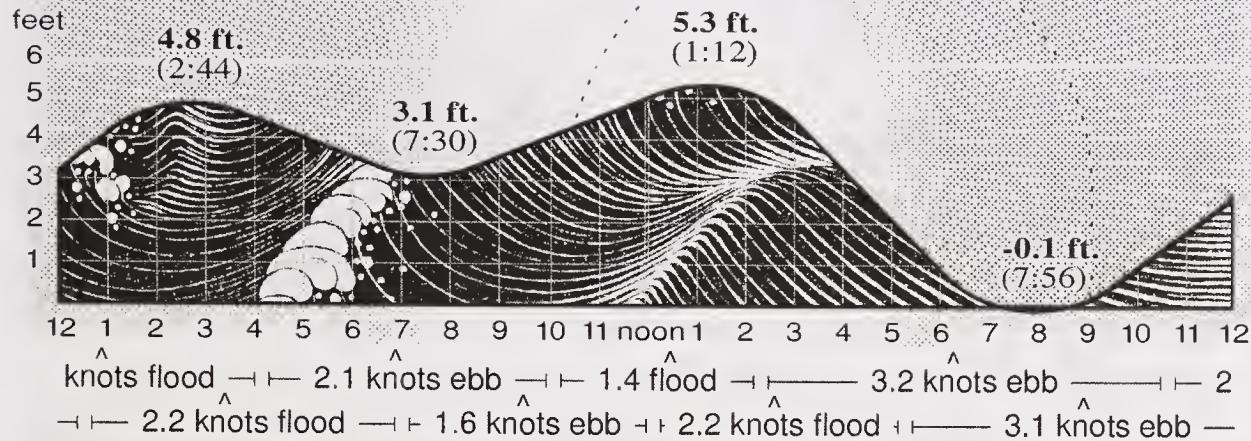
Winter Solstice 8:28 a.m. Ursids Meteors Peak

5.5 ft. (12:33)



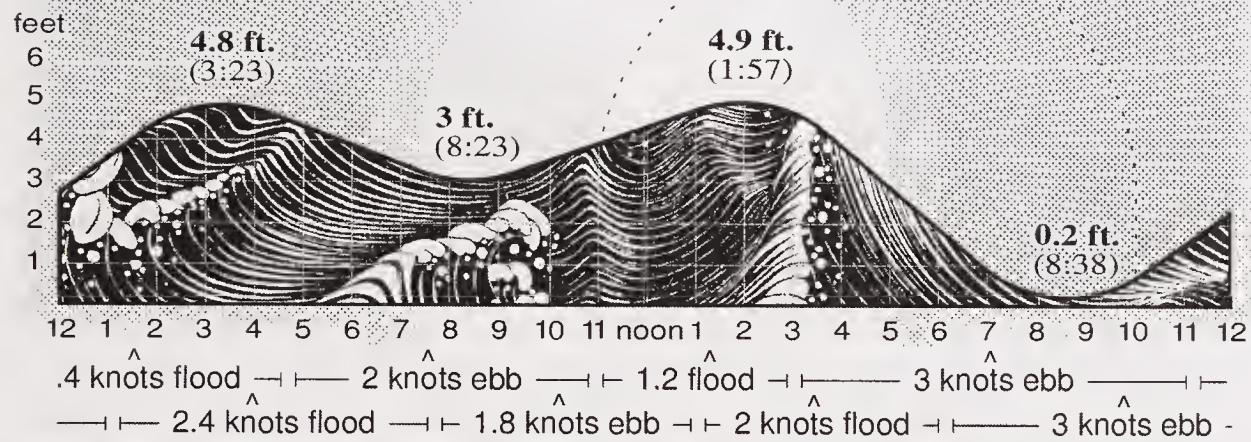
FRI DEC 22

dawn 6:20 sunrise 7:22 sunset 4:55 dark 5:58
moonrise 10:22 a.m. moonset 9:08 p.m.



SAT DEC 23

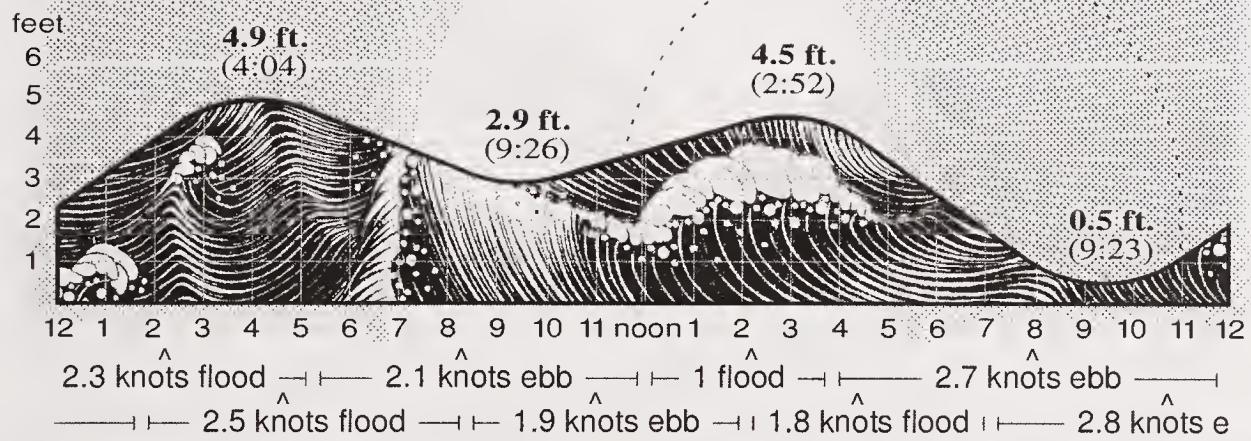
dawn 6:20 sunrise 7:23 sunset 4:56 dark 5:58
moonrise 10:57 a.m. moonset 10:06 p.m.



SUN DEC 24

dawn 6:21 sunrise 7:23 sunset 4:56 dark 5:59
moonrise 11:30 a.m. moonset 11:04 p.m.

Christmas Eve



Winter Solstice December 21, the shortest day of the year and the first day of winter in the northern hemisphere.

Ursids Meteor Shower The Ursids run annually from December 17th through the 25th with this year's peak falling on the night and morning of the 21st and 22nd. The Ursids are a minor shower with peak production of 5 to 10 per hour at zenith. This year the crescent moon will set early leaving the sky dark for viewing. The Ursids' radiant point is the constellation Ursa Minor commonly known as the Little Dipper. Look for the Little Dipper high in the night sky. The star at the end of the Little Dipper handle is the North Star, or Polaris.

MON DEC 25

Christmas Day

dawn 6:21 sunrise 7:24 sunset 4:57 dark 5:59
moonrise 12:02 p.m.

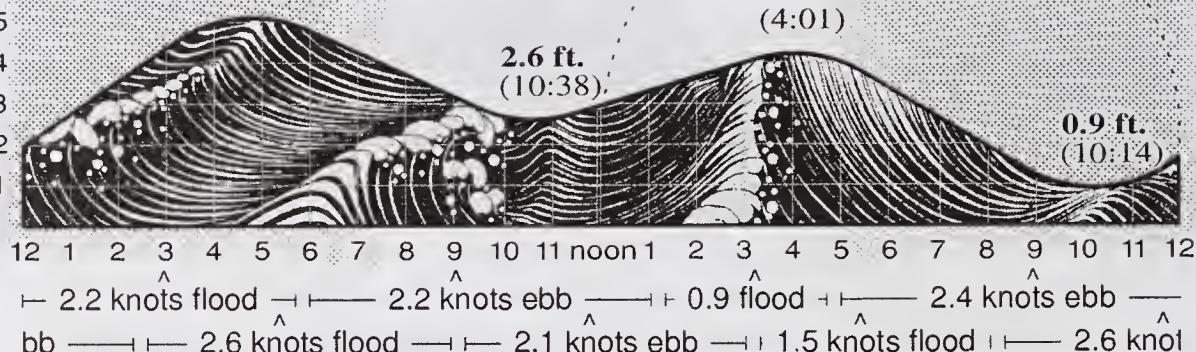


feet

5.1 ft.
(4:47)

4.2 ft.
(4:01)

0.9 ft.
(10:14)



TUE DEC 26

dawn 6:22 sunrise 7:24 sunset 4:58 dark 6:00
moonset 12:05 a.m. moonrise 12:34 p.m.



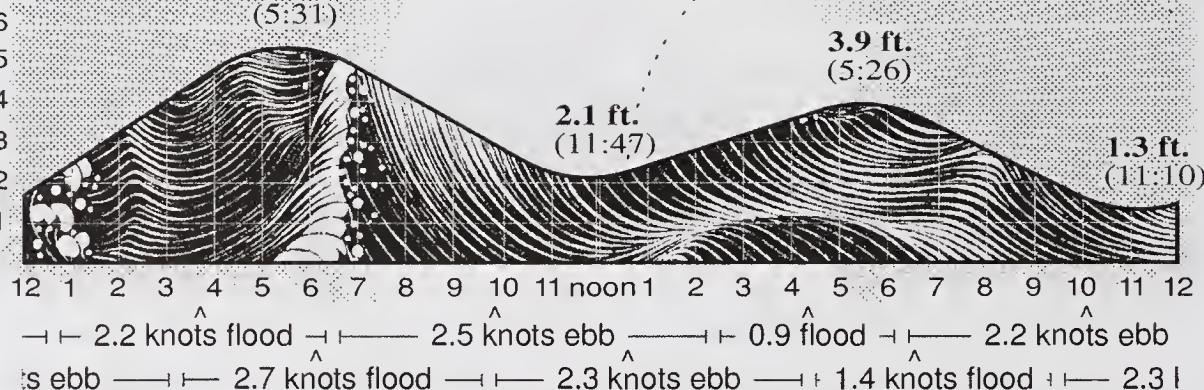
equator

feet

5.3 ft.
(5:31)

3.9 ft.
(5:26)

1.3 ft.
(11:10)



WED DEC 27

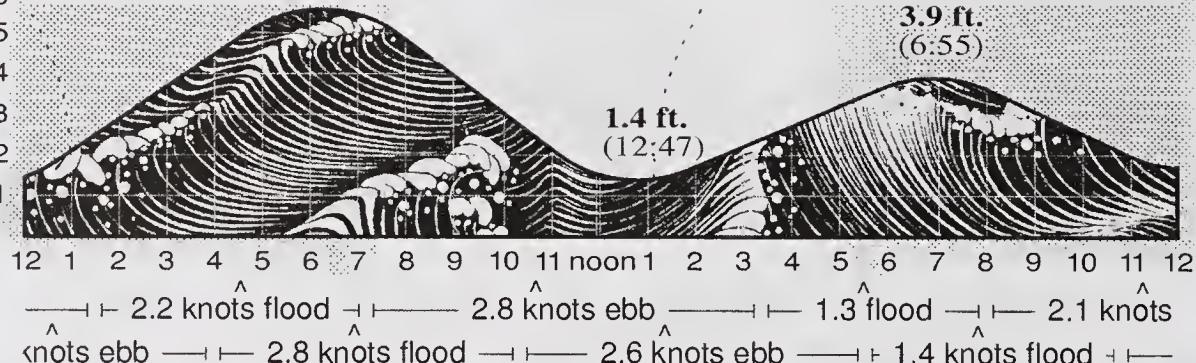
dawn 6:22 sunrise 7:24 sunset 4:58 dark 6:01
moonset 1:07 a.m. moonrise 1:08 p.m.



feet

5.6 ft.
(6:14)

3.9 ft.
(6:55)



THU DEC 28

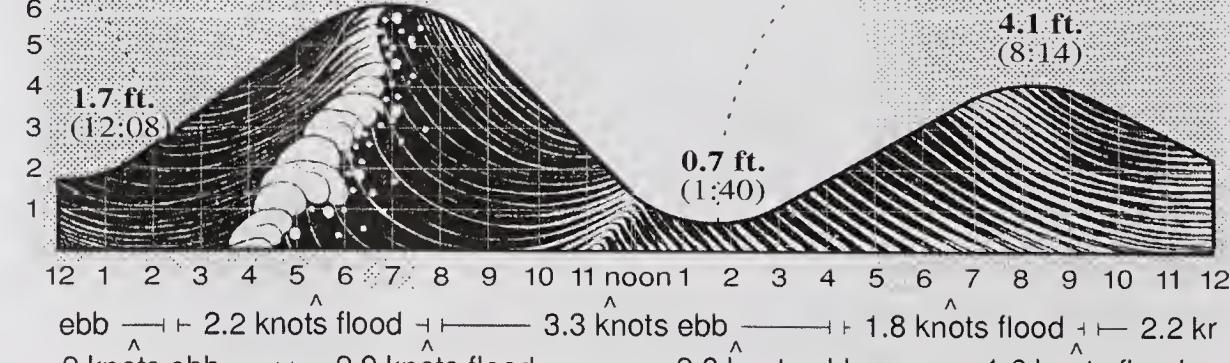
dawn 6:22 sunrise 7:25 sunset 4:59 dark 6:01
moonset 2:12 a.m. moonrise 1:44 p.m.



feet

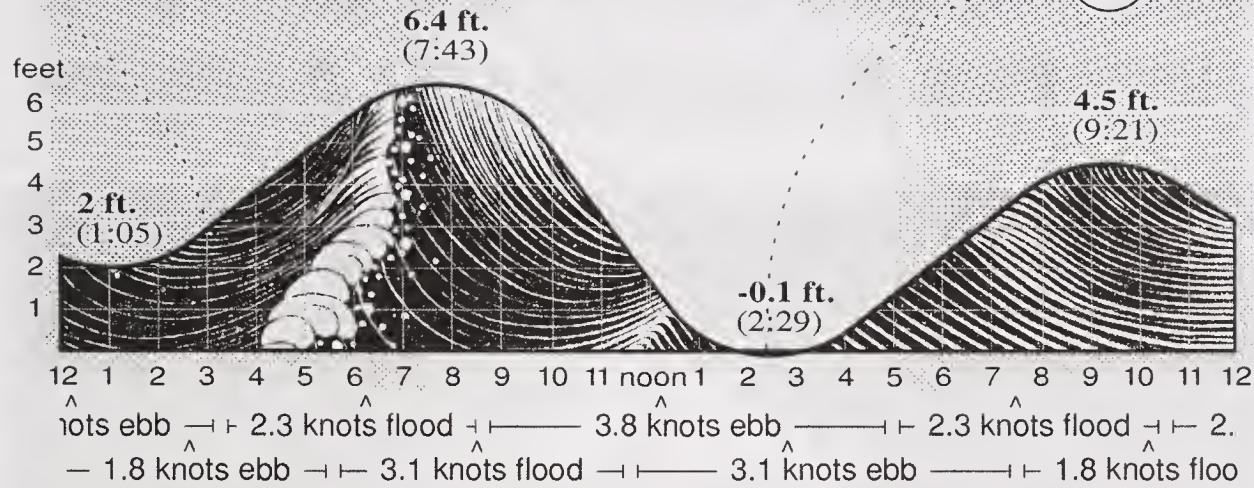
6 ft.
(6:58)

4.1 ft.
(8:14)



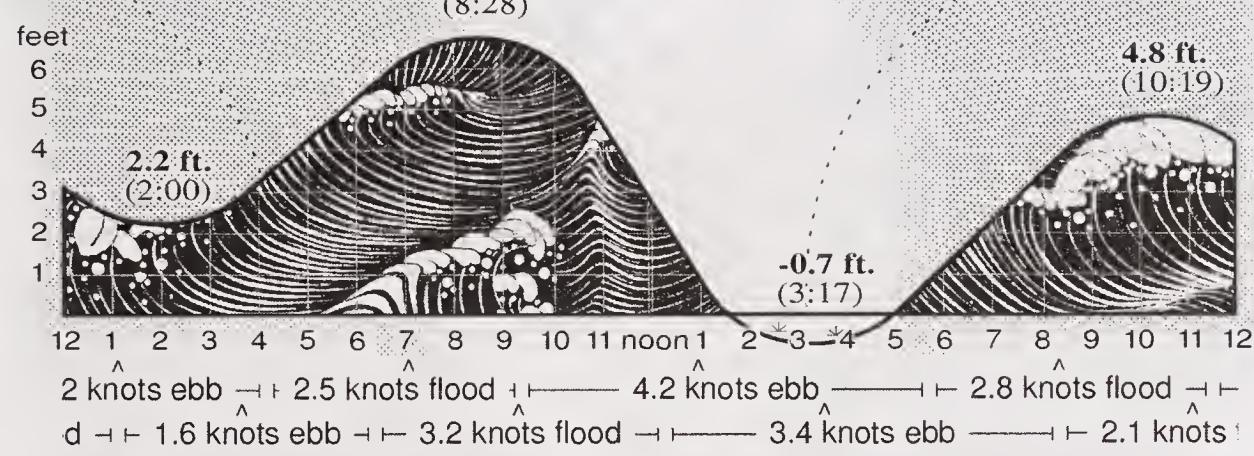
FRI DEC 29

dawn 6:23 sunrise 7:25 sunset 5:00 dark 6:02
moonset 3:19 a.m. moonrise 2:24 p.m.



SAT DEC 30

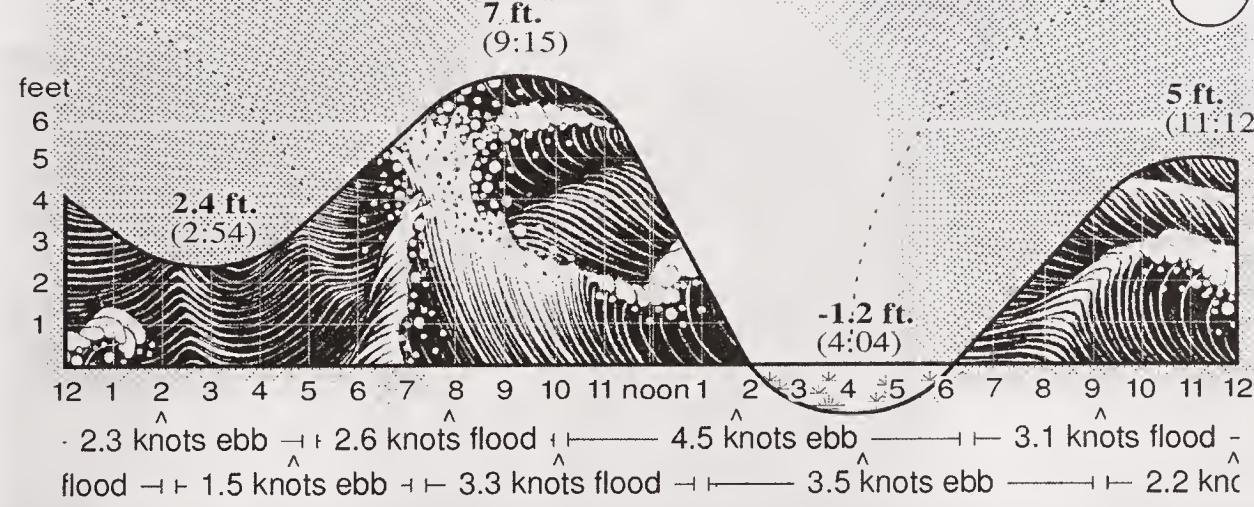
dawn 6:23 sunrise 7:25 sunset 5:00 dark 6:03
moonset 4:29 a.m. moonrise 3:10 p.m.



SUN DEC 31

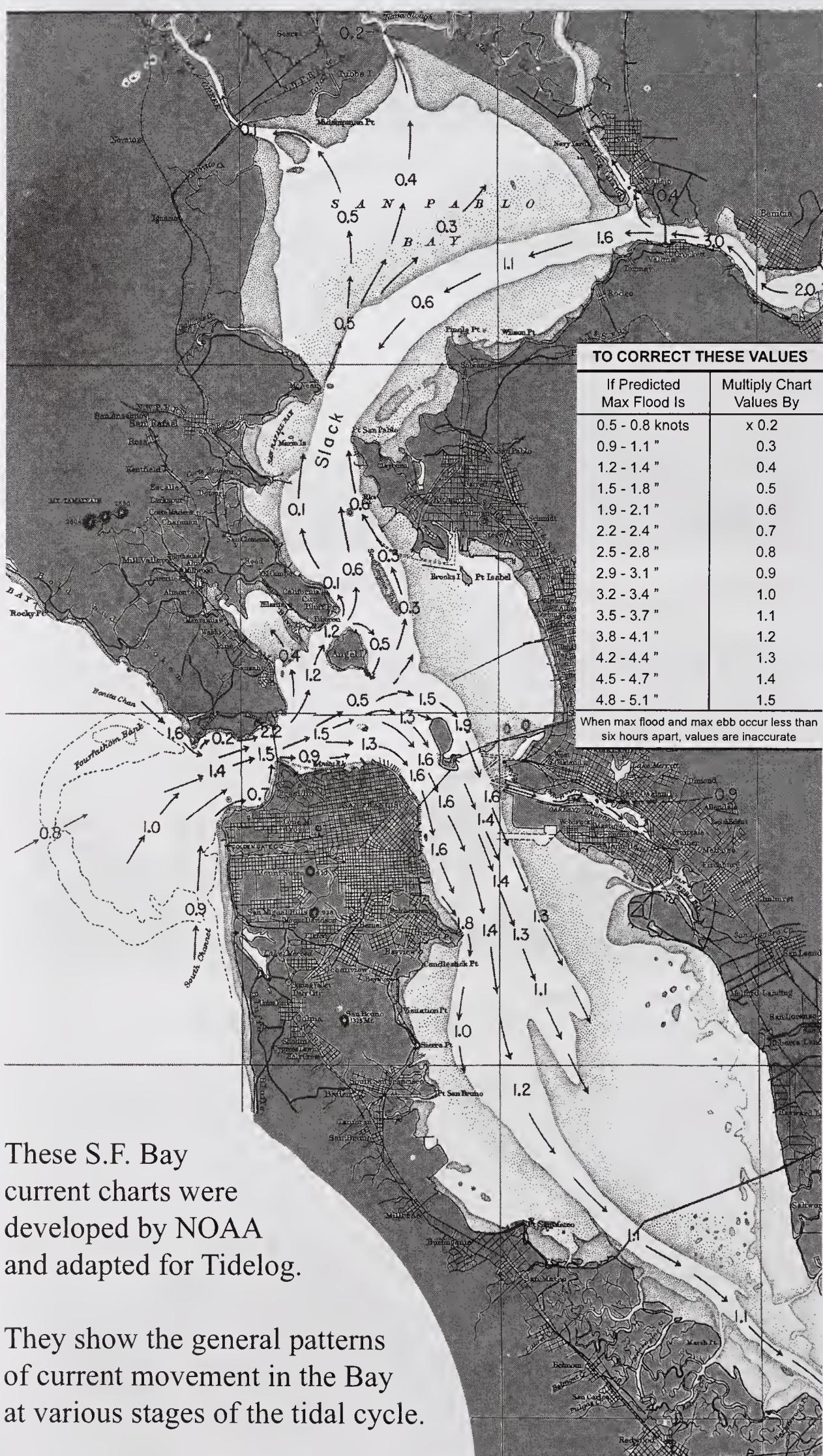
dawn 6:23 sunrise 7:25 sunset 5:01 dark 6:03
moonset 5:39 a.m. moonrise 4:04 p.m.

New Year's Eve



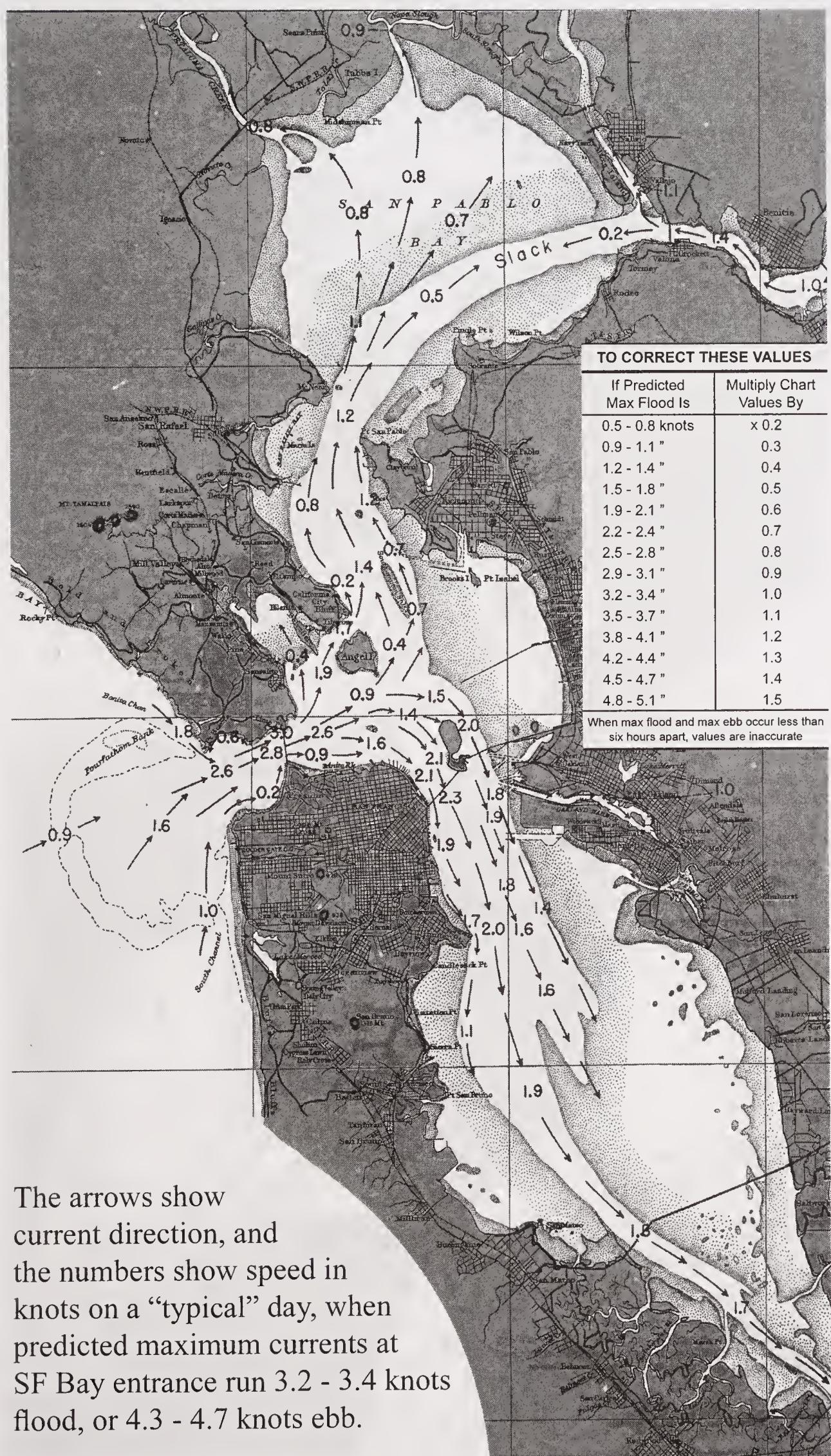
S.F. BAY CURRENTS

2 HOURS BEFORE MAXIMUM FLOOD AT S.F. BAY ENTRANCE



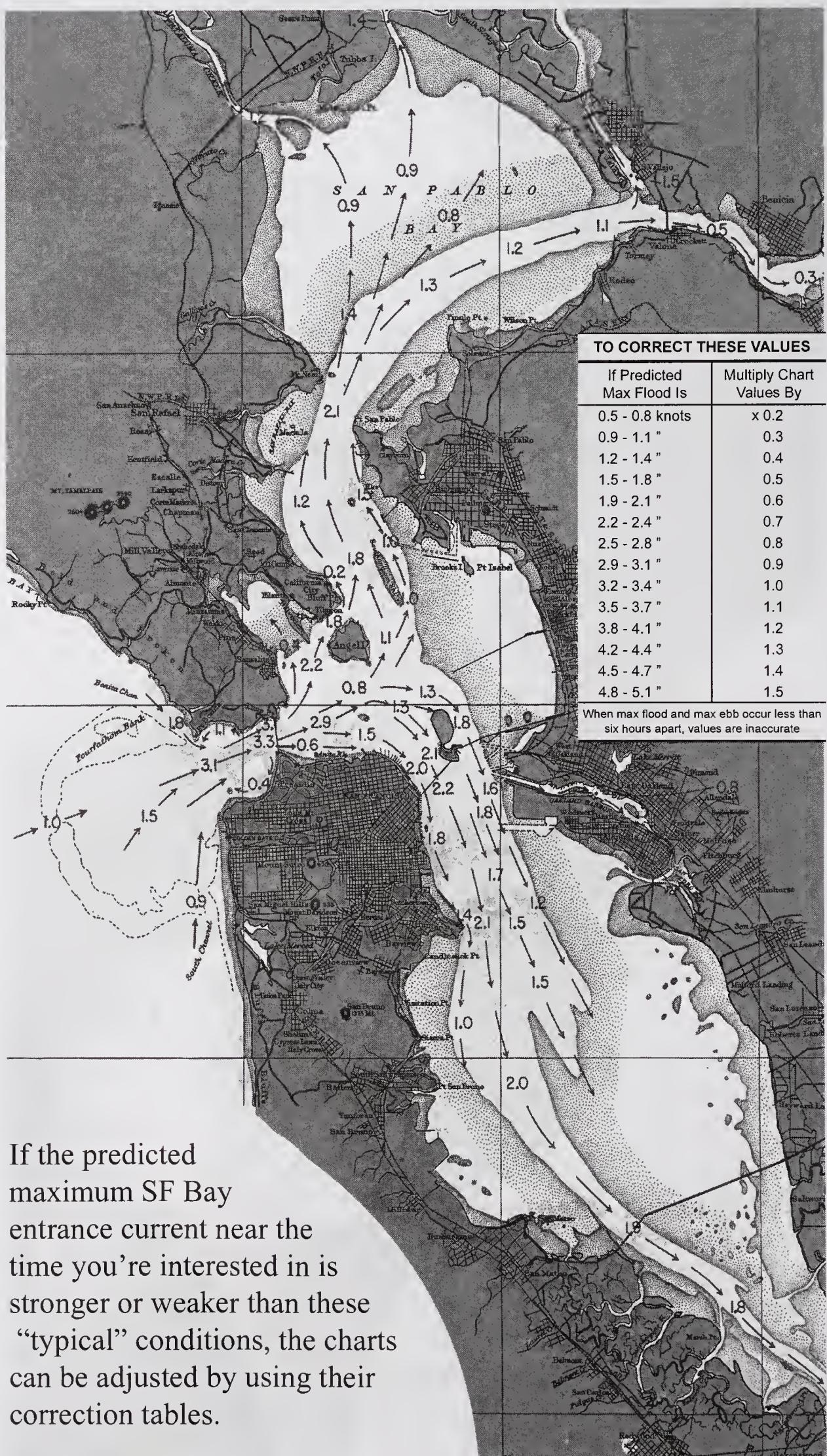
S.F. BAY CURRENTS

1 HOUR BEFORE MAXIMUM FLOOD AT S.F. BAY ENTRANCE



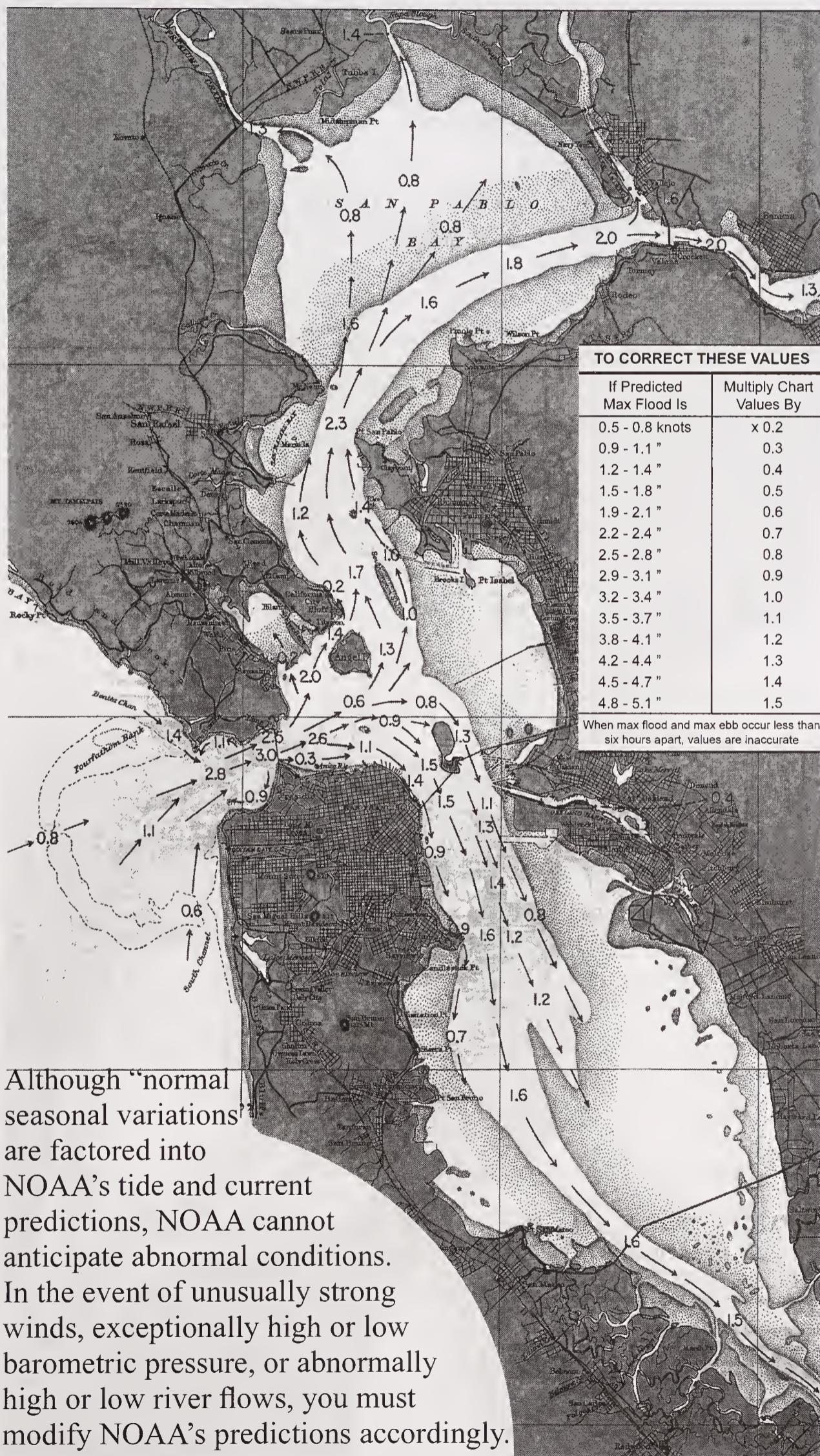
S.F. BAY CURRENTS

MAXIMUM FLOOD AT S.F. BAY ENTRANCE



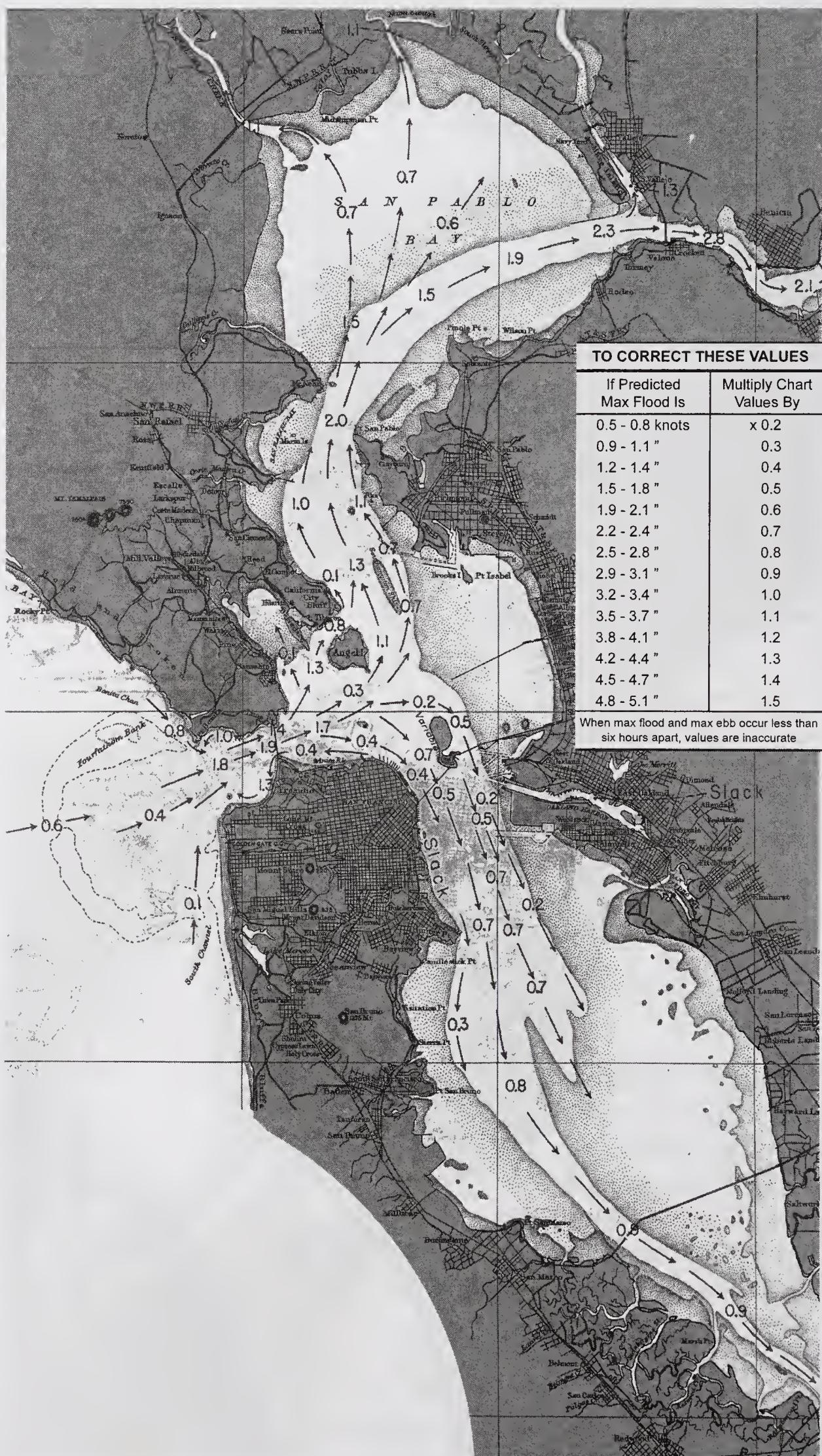
S.F. BAY CURRENTS

1 HOUR AFTER MAXIMUM FLOOD AT S.F. BAY ENTRANCE



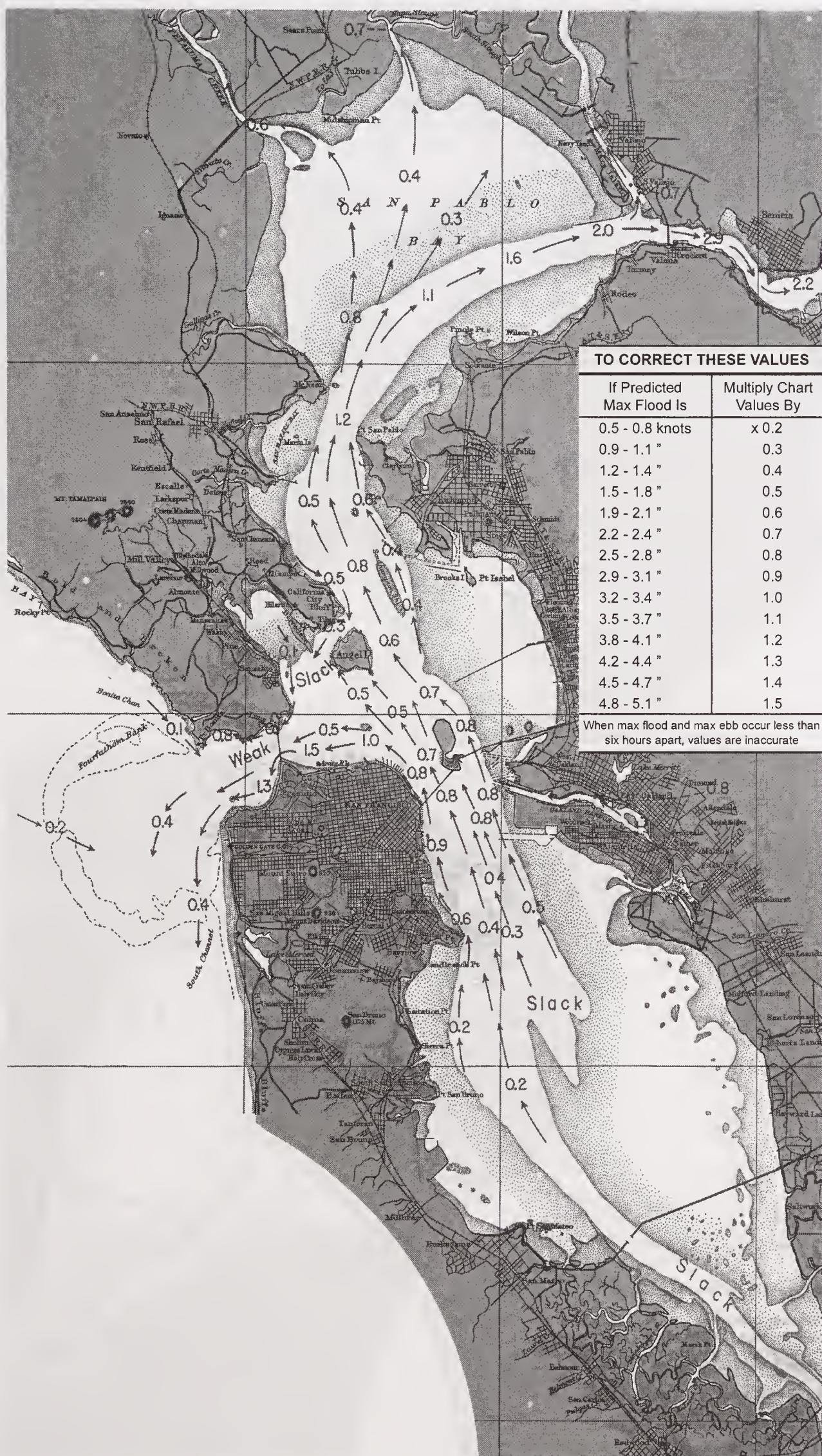
S.F. BAY CURRENTS

2 HOURS AFTER MAXIMUM FLOOD AT S.F. BAY ENTRANCE



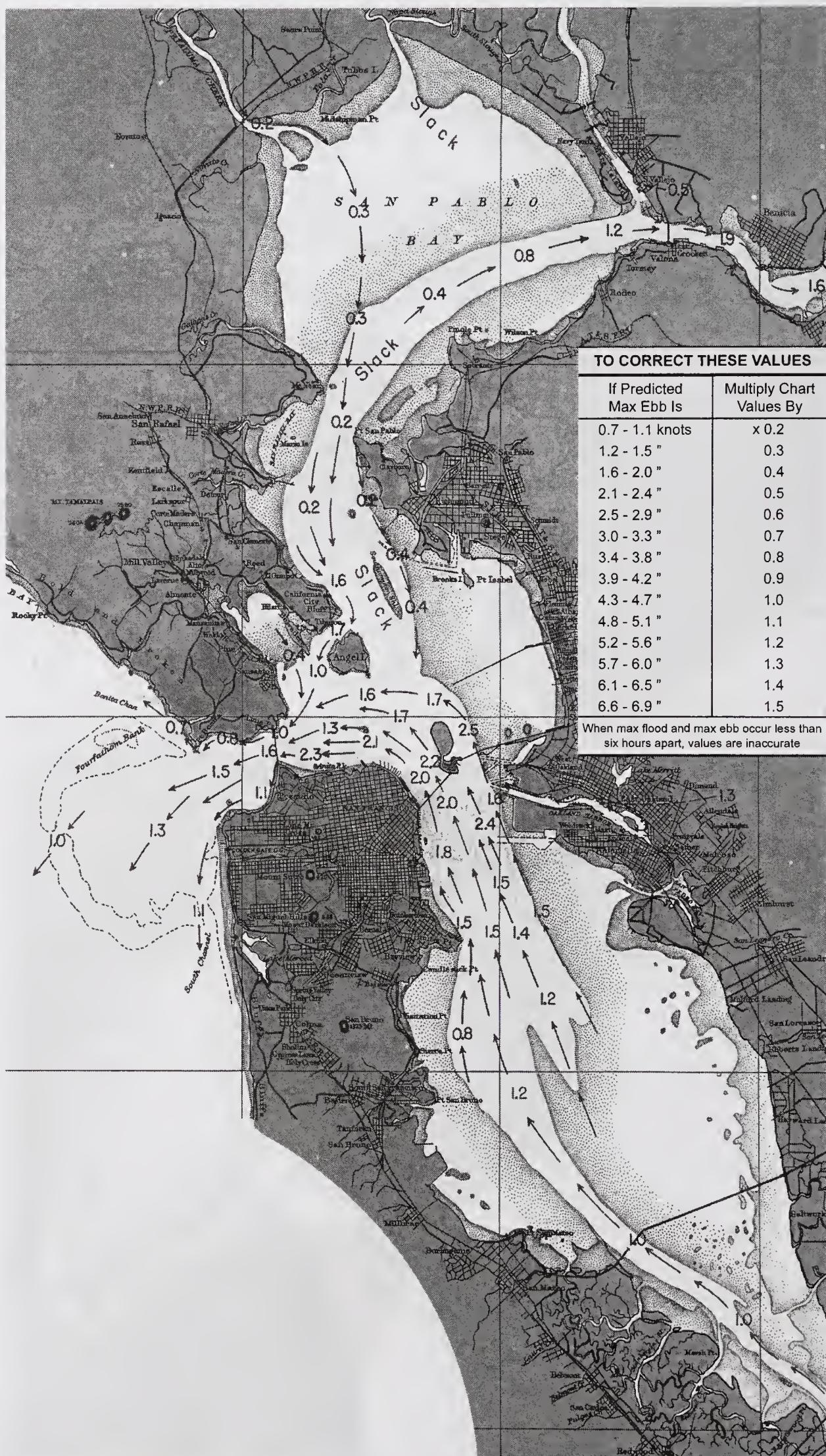
S.F. BAY CURRENTS

3 HOURS AFTER MAXIMUM FLOOD AT S.F. BAY ENTRANCE



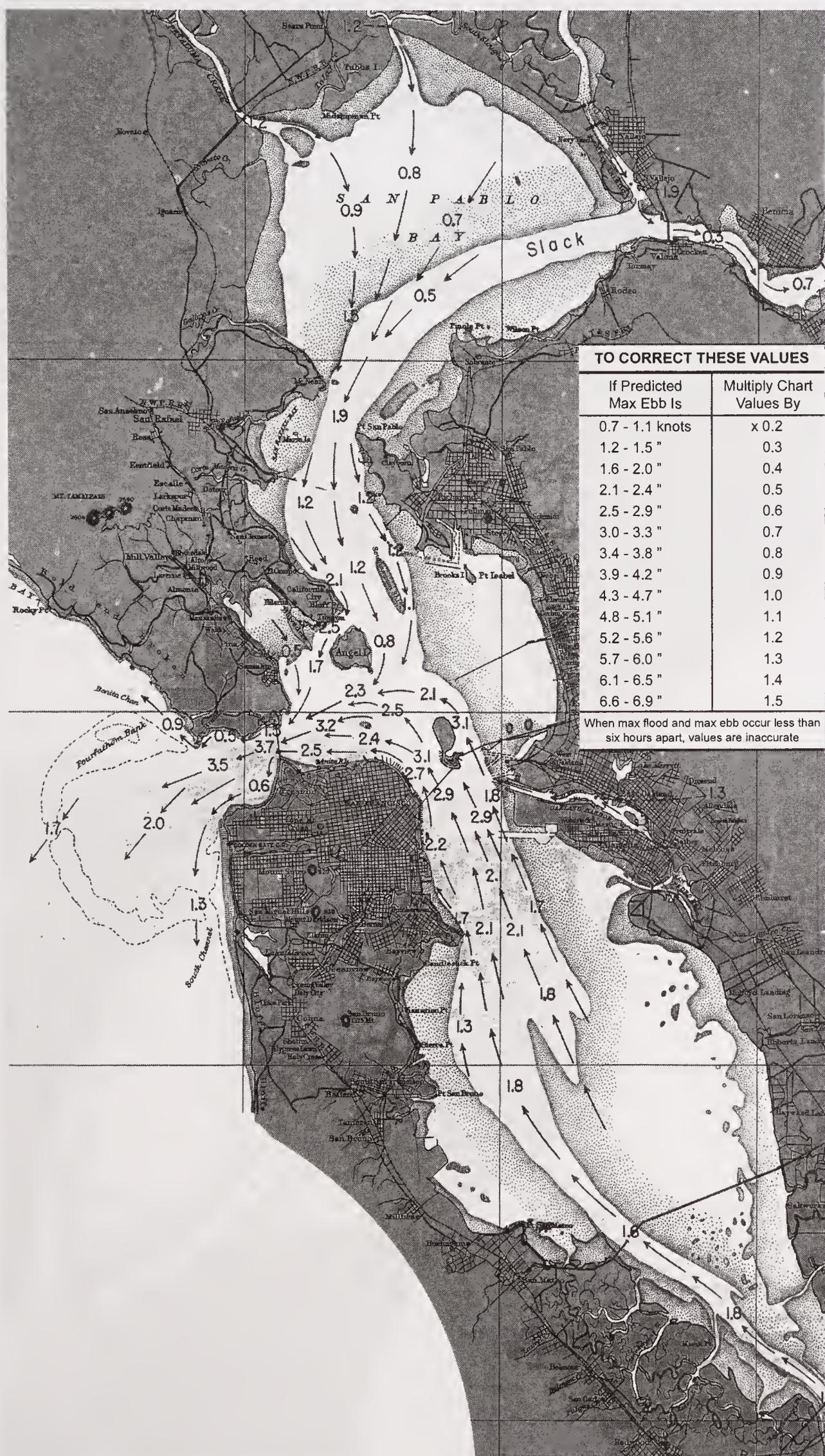
S.F. BAY CURRENTS

2 HOURS BEFORE MAXIMUM EBB AT S.F. BAY ENTRANCE



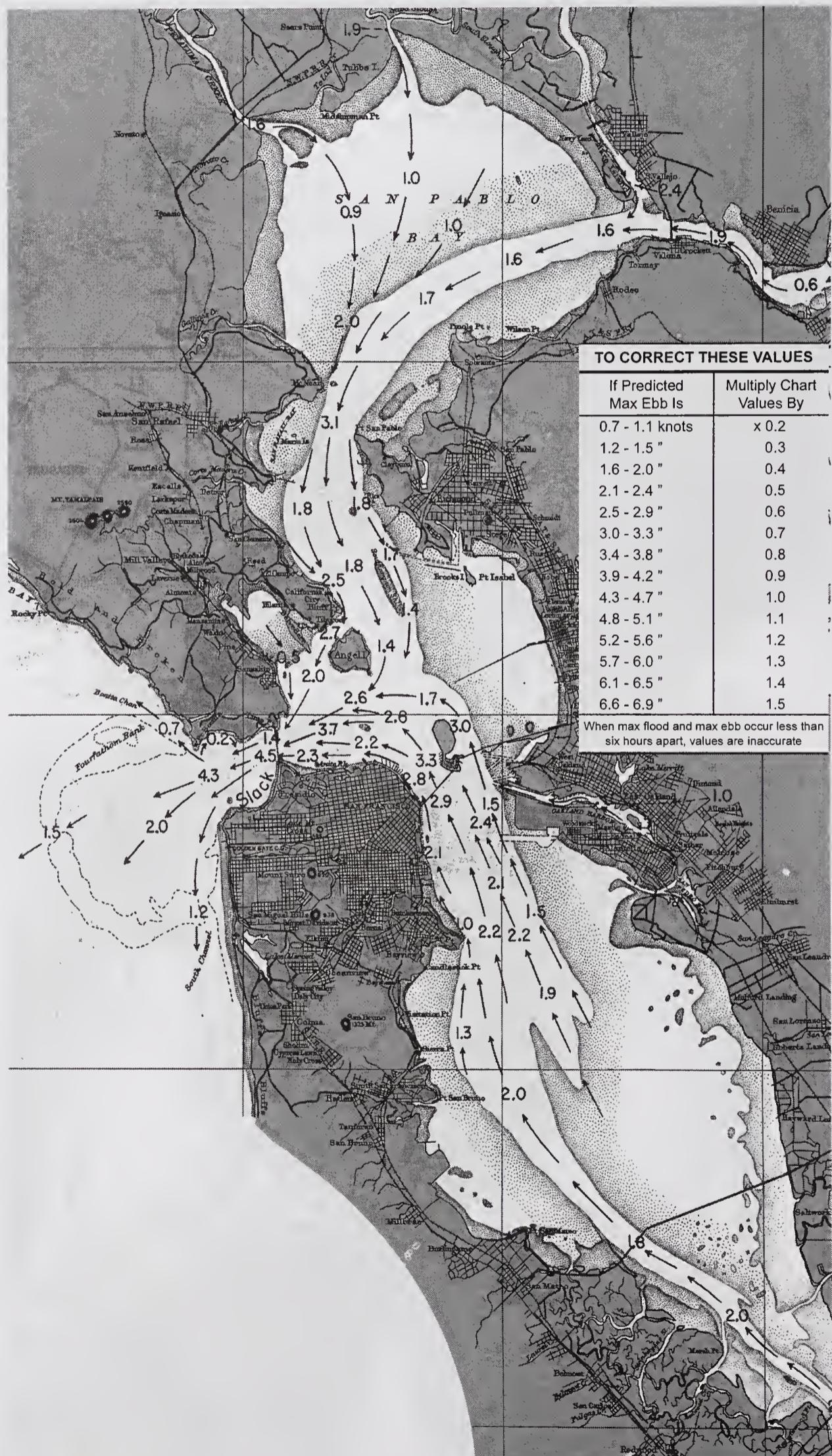
S.F. BAY CURRENTS

1 HOUR BEFORE MAXIMUM EBB AT S.F. BAY ENTRANCE



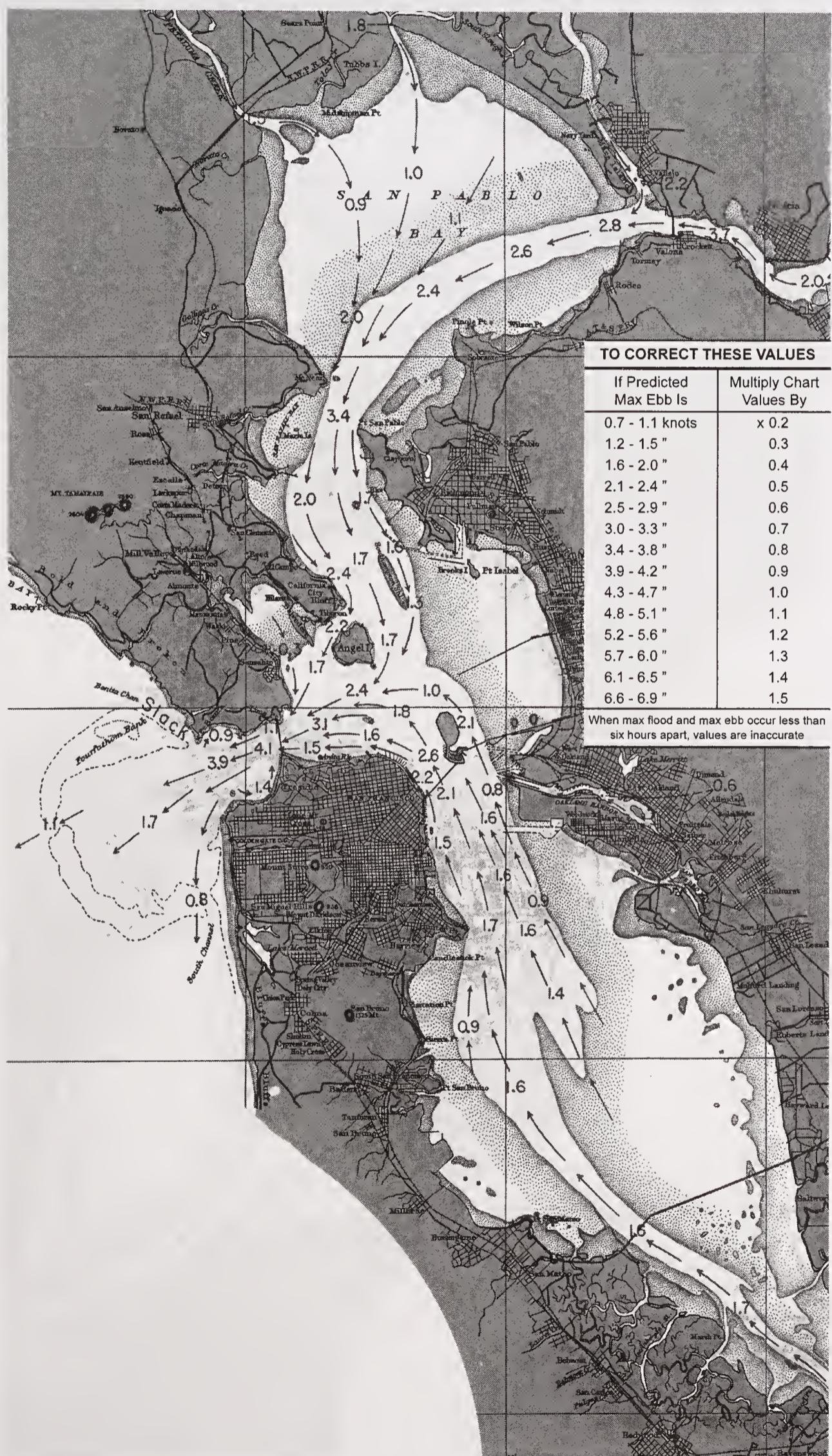
S.F. BAY CURRENTS

MAXIMUM EBB AT S.F. BAY ENTRANCE



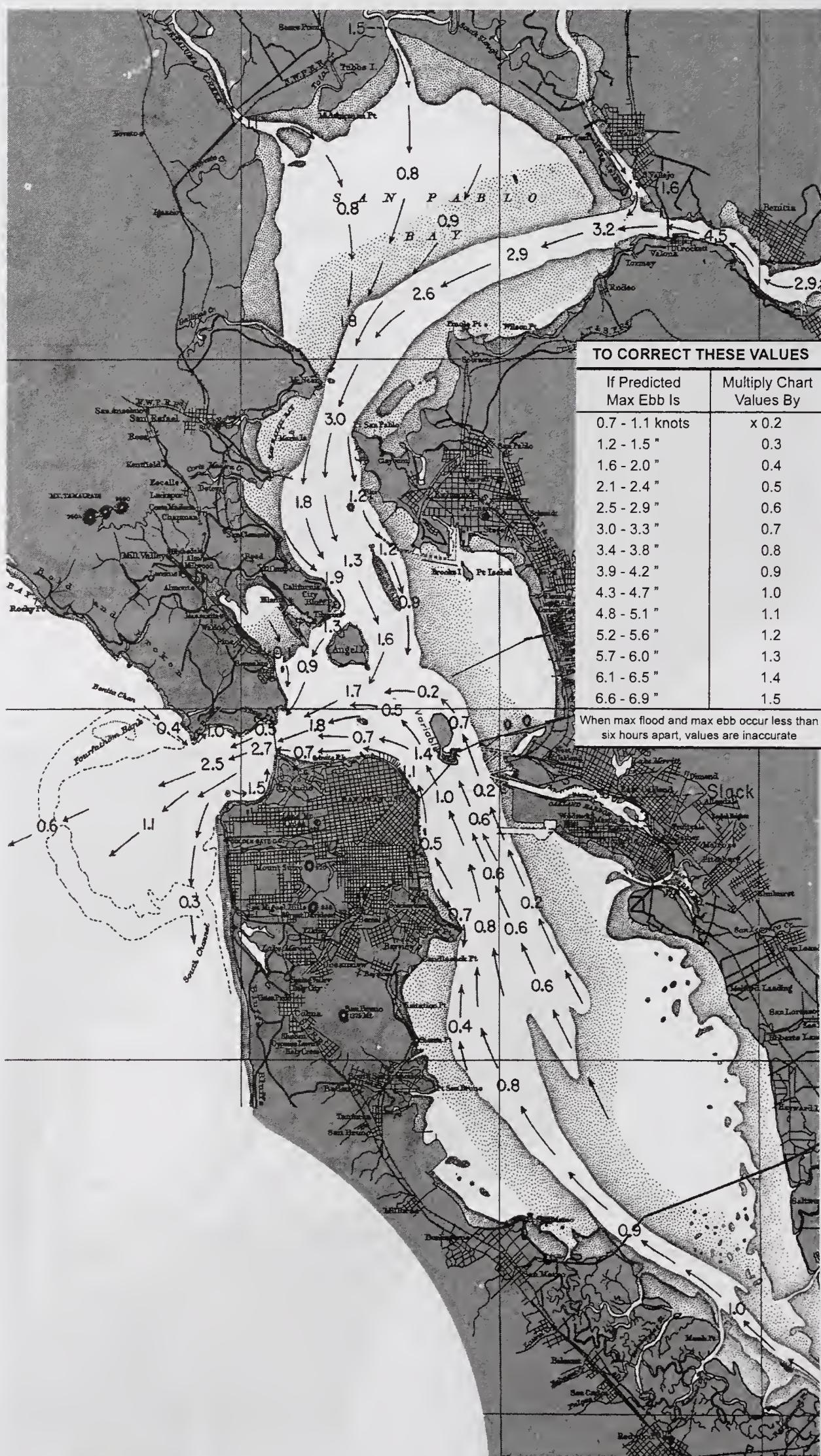
S.F. BAY CURRENTS

1 HOUR AFTER MAXIMUM EBB AT S.F. BAY ENTRANCE



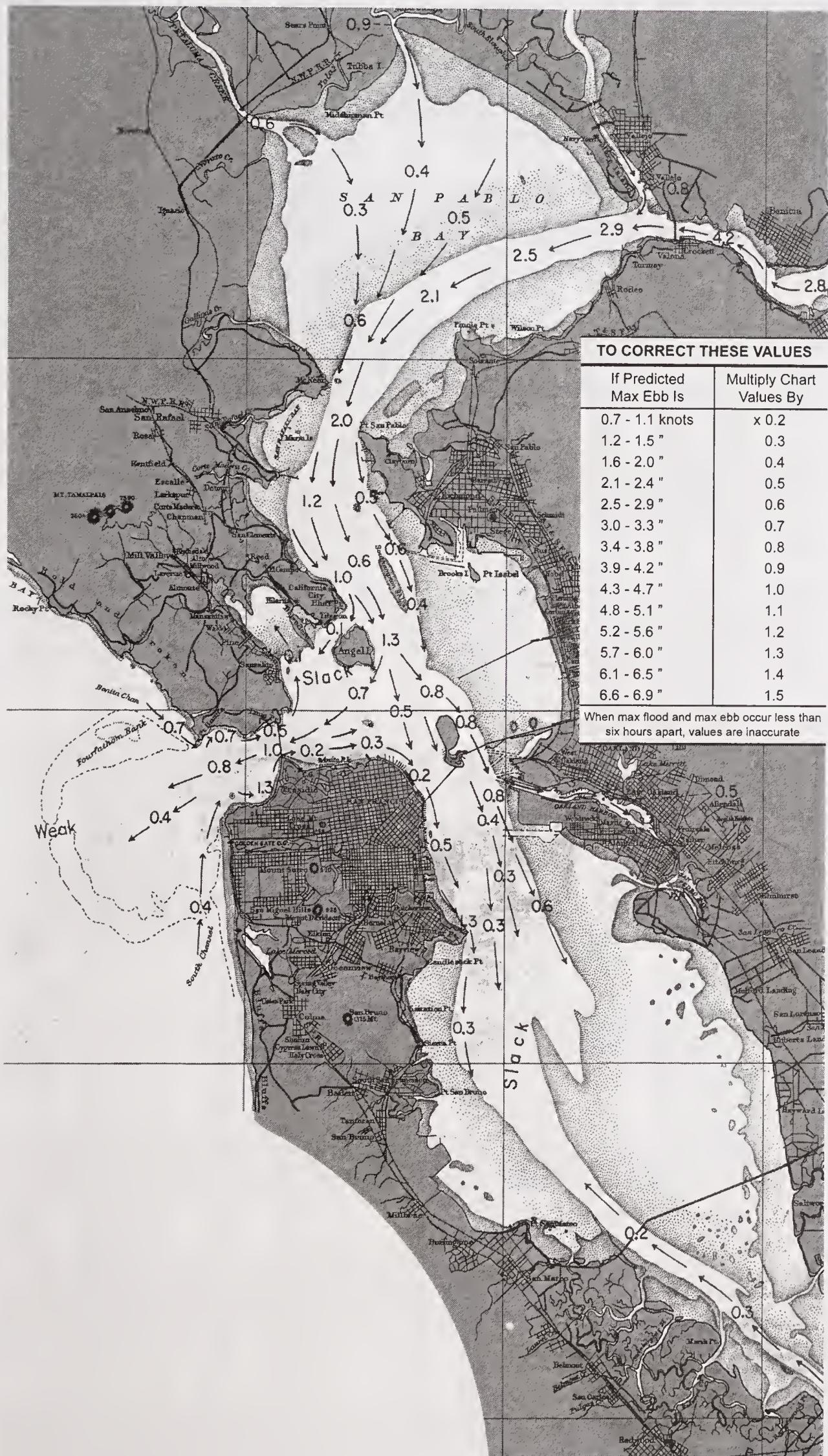
S.F. BAY CURRENTS

2 HOURS AFTER MAXIMUM EBB AT S.F. BAY ENTRANCE



S.F. BAY CURRENTS

3 HOURS AFTER MAXIMUM EBB AT S.F. BAY ENTRANCE



SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots		Time	Feet		Time	Feet	
Sun. 1/1	3:41a	6:28a	1.3e		4:47a	4.1		1:34a	5.0	
	9:20a	11:43a	1.2 f		9:55a	1.9		6:27a	3.2	
	2:17p	6:02p	1.8e		3:13p	5.0		12:09p	6.0	
	9:18p				10:38p	-0.2		7:19p	-0.1	
Mon. 1/2	4:15a	12:18a	1.7 f		5:22a	4.1		2:14a	5.1	
	10:05a	7:09a	1.3e		10:45a	1.7		7:19a	3.1	
	3:06p	12:30p	1.1 f		4:02p	4.7		12:54p	5.7	
	9:58p	6:48p	1.7e		11:14p	-0.2		7:58p	0.2	
Tue. 1/3	4:50a	1:00a	1.7 f		5:59a	4.2		2:54a	5.3	
	10:55a	7:52a	1.3e		11:41a	1.6		8:21a	3.0	
	4:04p	1:22p	1.1 f		4:59p	4.3		1:48p	5.3	
	10:44p	7:39p	1.6e		11:55p	0.0		8:40p	0.5	
Wed. 1/4	5:27a	1:47a	1.6 f		6:40a	4.3		3:37a	5.5	
	11:52a	8:39a	1.4e		12:46p	1.4		9:31a	2.7	
	5:14p	2:20p	1.1 f		6:07p	3.9		2:54p	4.8	
	11:38p	8:37p	1.4e					9:26p	1.0	
Thu. 1/5	6:09a	2:38a	1.5 f		12:42a	0.3		4:22a	5.8	
	12:56p	9:31a	1.4e		7:25a	4.4		10:46a	2.2	
	6:37p	3:24p	1.1 f		2:02p	1.1		4:15p	4.4	
		9:42p	1.2e		7:34p	3.6		10:17p	1.5	
Fri. 1/6	12:38a	3:35a	1.4 f		1:35a	0.6		5:09a	6.1	
	6:56a	10:29a	1.5e		8:14a	4.7		11:59a	1.6	
	2:02p	4:33p	1.2 f		3:18p	0.8		5:45p	4.2	
	8:04p	10:54p	1.1e		9:05p	3.5		11:13p	1.9	
Sat. 1/7	1:45a	4:34a	1.4 f		2:34a	0.9		5:58a	6.5	
	7:48a	11:30a	1.7e		9:04a	5.0		1:03p	0.8	
	3:06p	5:43p	1.3 f		4:28p	0.4		7:11p	4.3	
	9:25p				10:24p	3.6				
Sun. 1/8	2:54a	12:09a	1.1e		3:35a	1.3		12:13a	2.3	
	8:44a	5:34a	1.4 f		9:54a	5.3		6:47a	6.8	
	4:07p	12:32p	1.8e		5:30p	0.0		2:01p	0.1	
	10:37p	6:51p	1.5 f		11:31p	3.8		8:25p	4.5	
Mon. 1/9	4:00a	1:21a	1.1e		4:37a	1.5		1:14a	2.5	
	9:39a	6:34a	1.4 f		10:42a	5.6		7:37a	7.1	
	5:03p	1:32p	2.0e		6:26p	-0.3		2:53p	-0.5	
	11:39p	7:53p	1.6 f					9:27p	4.8	
Tue. 1/10	5:01a	2:26a	1.2e		12:31a	4.1		2:13a	2.6	
	10:34a	7:30a	1.5 f		5:36a	1.7		8:27a	7.3	
	5:55p	2:28p	2.1e		11:31a	5.8		3:42p	-1.0	
	8:47p	1:48p	1.8 f		7:17p	-0.5		10:20p	5.1	
Wed. 1/11	12:35a	3:25a	1.4e		1:26a	4.3		3:10a	2.7	
	5:59a	8:24a	1.6 f		6:34a	1.8		9:16a	7.4	
	11:26a	3:20p	2.1e		12:19p	5.8		4:29p	-1.2	
	6:43p	9:35p	1.9 f		8:05p	-0.6		11:09p	5.3	
Thu. 1/12	1:27a	4:20a	1.5e		2:17a	4.5		4:04a	2.7	
	6:54a	9:16a	1.6 f		7:29a	1.8		10:05a	7.4	
	12:16p	4:08p	2.1e		1:08p	5.8		5:14p	-1.2	
	7:29p	10:19p	1.9 f		8:51p	-0.6		11:55p	5.5	
Fri. 1/13	2:15a	5:10a	1.5e		3:06a	4.6		4:57a	2.6	
	7:46a	10:05a	1.6 f		8:24a	1.8		10:53a	7.2	
	1:04p	4:52p	2.1e		1:57p	5.6		5:58p	-1.0	
	8:11p	11:01p	1.9 f		9:33p	-0.5		11:46a	8.3	
Sat. 1/14	3:00a	5:58a	1.6e		3:52a	4.6		12:39a	5.6	
	8:38a	10:55a	1.5 f		9:17a	1.7		5:50a	2.6	
	1:51p	5:33p	2.0e		2:46p	5.4		11:41a	6.8	
	8:52p	11:41p	1.9 f		10:14p	-0.4		6:41p	-0.7	
Sun. 1/15	3:42a	6:44a	1.6e		4:37a	4.7		1:24a	5.6	
	9:29a	11:44a	1.4 f		10:10a	1.6		6:44a	2.6	
	2:40p	6:13p	1.8e		3:36p	5.0		12:30p	6.3	
	9:32p				10:52p	-0.2		7:23p	-0.2	
Mon. 1/16	4:22a	12:22a	1.8 f		5:21a	4.6		2:08a	5.7	
	10:22a	7:28a	1.5e		11:05a	1.5		7:42a	2.6	
	3:31p	12:35p	1.2 f		4:30p	4.5		1:20p	5.7	
	10:12p	6:54p	1.6e		11:29p	0.1		8:04p	0.4	
Tue. 1/17	4:59a	1:03a	1.6 f		6:05a	4.6		2:52a	5.7	
	11:17a	8:12a	1.4e		12:04p	1.4		8:45a	2.5	
	4:28p	1:30p	1.1 f		5:30p	4.1		2:16p	5.0	
	10:54p	7:38p	1.3e					8:46p	1.0	
Wed. 1/18	5:36a	1:47a	1.4 f		12:08a	0.4		3:37a	5.7	
	12:16p	8:58a	1.4e		6:50a	4.5		9:54a	2.4	
	5:34p	2:29p	1.0 f		1:08p	1.3		3:22p	4.5	
	11:40p	8:28p	1.0e		6:42p	3.6		9:30p	1.6	
Thu. 1/19	6:14a	2:34a	1.3 f		12:49a	0.7		4:23a	5.7	
	1:17p	9:47a	1.3e		7:35a	4.5		11:06a	2.2	
	6:49p	3:35p	0.9 f		2:17p	1.1		4:42p	4.0	
	9:27p	9:27p	0.8e		8:02p	3.4		10:17p	2.2	
Fri. 1/20	12:34a	3:25a	1.1 f		1:36a	1.1		5:09a	5.7	
	6:55a	10:41a	1.3e		8:22a	4.6		12:16p	1.8	
	2:18p	4:50p	0.9 f		3:27p	0.9		6:12p	3.9	
	8:08p	10:37p	0.7e		9:19p	3.3		11:10p	2.6	
Sat. 1/21	1:35a	4:20a	1.0 f		2:29a	1.5		5:55a	5.8	
	7:41a	11:37a	1.3e		9:07a	4.7		1:15p	1.4	
	3:16p	6:06p	1.0 f		4:30p	0.6		7:35p	3.9	
	9:23p	11:53p	0.6e		10:27p	3.5				
Sun. 1/22	2:41a	5:17a	0.9 f		3:26a	1.8		12:06a	2.9	
	8:29a	12:30p	1.4e		9:50a	4.8		6:40a	5.9	
	4:08p	7:10p	1.1 f		5:24p	0.3		2:05p	1.0	
	10:26p				11:26p	3.7		8:39p	4.1	
Mon. 1/23	3:43a	1:03a	0.7e		4:21a	2.0		1:03a	3.1	
	9:17a	6:12a	1.0 f		10:29a	4.9		7:23a	6.0	
	4:53p	1:15p	1.5e		6:12p	0.1		2:47p	0.6	
	11:19p	8:00p	1.3 f					9:28p	4.3	

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

	SLACK			CURRENT			TIDE		TIDE		TIDE	
	Time	Time	Knots	Time	Feet	Time	Feet	Time	Feet	Time	Feet	
Tue. 1/24	4:38a	1:59a	0.8e	12:18a	3.9	1:54a	3.2	2:38a	3.4			
	10:03a	7:04a	1.0 f	5:13a	2.1	8:03a	6.2	8:50a	7.1			
	5:34p	1:53p	1.5e	11:06a	5.1	3:24p	0.3	3:57p	0.3			
		8:39p	1.4 f	6:54p	0.0	10:07p	4.5	10:42p	5.3			
Wed. 1/25	12:04a	2:47a	1.0e	1:04a	4.1	2:40a	3.2	3:27a	3.4			
	5:29a	7:51a	1.1 f	6:01a	2.2	8:43a	6.4	9:32a	7.3			
	10:47a	2:30p	1.6e	11:42a	5.3	4:00p	0.0	4:35p	-0.1			
	6:09p	9:10p	1.5 f	7:32p	0.0	10:42p	4.7	11:20p	5.5			
Thu. 1/26	12:45a	3:30a	1.1e	1:47a	4.3	3:22a	3.1	4:11a	3.3			
	6:14a	8:35a	1.2 f	6:47a	2.2	9:21a	6.5	10:13a	7.5			
	11:27a	3:06p	1.7e	12:18p	5.4	4:34p	-0.2	5:11p	-0.4			
	6:42p	9:38p	1.6 f	8:07p	-0.1	11:15p	4.9	11:55p	5.8			
Fri. 1/27	1:23a	4:10a	1.2e	2:25a	4.3	4:03a	3.0	4:53a	3.1			
	6:57a	9:17a	1.2 f	7:30a	2.1	9:59a	6.6	10:52a	7.5			
	12:06p	3:44p	1.8e	12:57p	5.4	5:07p	-0.3	5:46p	-0.5			
	7:14p	10:07p	1.7 f	8:39p	-0.1	11:47p	5.1					
Sat. 1/28	1:59a	4:48a	1.3e	3:00a	4.4	4:44a	2.9	12:29a	6.0			
	7:37a	9:59a	1.3 f	8:13a	1.9	10:38a	6.6	5:34a	2.9			
	12:46p	4:23p	1.9e	1:38p	5.4	5:41p	-0.3	11:32a	7.5			
	7:46p	10:38p	1.8 f	9:09p	-0.1	6:15p	-0.2	6:21p	-0.6			
Sun. 1/29	2:32a	5:25a	1.4e	3:32a	4.4	12:19a	5.2	1:03a	6.2			
	8:16a	10:41a	1.4 f	8:56a	1.8	5:27a	2.7	6:16a	2.7			
	1:27p	5:04p	1.9e	2:22p	5.3	11:18a	6.4	12:12p	7.4			
	8:20p	11:13p	1.9 f	9:38p	-0.1	6:15p	-0.2	6:56p	-0.5			
Mon. 1/30	3:04a	6:02a	1.5e	4:02a	4.5	12:53a	5.4	1:38a	6.3			
	8:57a	11:24a	1.4 f	9:41a	1.6	6:13a	2.6	7:00a	2.5			
	2:13p	5:47p	1.9e	3:08p	5.1	12:01p	6.2	12:54p	7.2			
	8:57p	11:50p	1.9 f	10:09p	0.0	6:51p	0.1	7:32p	-0.3			
Tue. 1/31	3:34a	6:40a	1.5e	4:32a	4.6	1:28a	5.6	2:14a	6.5			
	9:40a	12:11p	1.4 f	10:28a	1.4	7:04a	2.4	7:48a	2.3			
	3:04p	6:34p	1.8e	3:58p	4.8	12:49p	5.8	1:40p	6.8			
	9:38p			10:43p	0.1	7:28p	0.4	8:09p	0.1			
Wed. 2/1	4:05a	12:32a	1.8 f	5:05a	4.7	2:06a	5.7	2:52a	6.7			
	10:28a	7:20a	1.6e	11:22a	1.2	8:02a	2.2	8:41a	2.1			
	4:03p	1:02p	1.4 f	4:55p	4.4	1:44p	5.3	2:33p	6.2			
	10:24p	7:25p	1.6e	11:23p	0.4	8:08p	0.9	8:49p	0.7			
Thu. 2/2	4:41a	1:18a	1.7 f	5:43a	4.7	2:48a	5.9	3:33a	6.9			
	11:24a	8:06a	1.6e	12:25p	1.1	9:07a	1.9	9:42a	1.9			
	5:13p	1:58p	1.3 f	6:06p	3.9	2:51p	4.7	3:35p	5.7			
	11:17p	8:22p	1.3e			8:52p	1.5	9:34p	1.3			
Fri. 2/3	5:24a	2:09a	1.5 f	12:09a	0.7	3:35a	6.1	4:19a	7.0			
	12:28p	8:58a	1.6e	6:30a	4.8	10:20a	1.5	10:49a	1.6			
	6:34p	3:02p	1.2 f	1:41p	0.9	4:12p	4.3	4:50p	5.1			
	9:29p	1:1e		7:35p	3.6	9:44p	2.0	10:26p	2.0			
Sat. 2/4	12:18a	3:07a	1.4 f	1:04a	1.1	4:27a	6.3	5:11a	7.2			
	6:16a	9:59a	1.6e	7:25a	5.0	11:35a	1.1	12:01p	1.1			
	1:39p	4:13p	1.2 f	3:02p	0.7	5:45p	4.1	6:14p	4.9			
	8:02p	10:45p	1.0e	9:04p	3.6	10:45p	2.4	11:28p	2.5			
Sun. 2/5	1:28a	4:09a	1.3 f	2:09a	1.5	5:24a	6.5	6:09a	7.4			
	7:17a	11:07a	1.6e	8:26a	5.1	12:44p	0.5	1:12p	0.6			
	2:49p	5:32p	1.2 f	4:15p	0.4	7:12p	4.2	7:42p	4.9			
	9:23p			10:20p	3.8	11:55p	2.7					
Mon. 2/6	2:41a	12:04a	1.0e	3:20a	1.7	6:23a	6.7	12:39a	2.9			
	8:22a	5:14a	1.3 f	9:29a	5.3	1:46p	0.0	7:09a	7.6			
	3:53p	12:18p	1.7e	5:19p	0.0	8:23p	4.5	2:17p	0.1			
	10:33p	6:49p	1.4 f	11:24p	4.0			8:58p	5.2			
Tue. 2/7	3:50a	1:18a	1.1e	4:30a	1.8	1:05a	2.8	1:50a	3.0			
	9:25a	6:18a	1.3 f	10:29a	5.4	7:21a	6.8	8:09a	7.8			
	4:50p	1:23p	1.8e	6:13p	-0.2	2:40p	-0.4	3:14p	-0.4			
	11:32p	7:53p	1.6 f			9:19p	4.9	10:00p	5.6			
Wed. 2/8	4:53a	2:21a	1.3e	12:20a	4.3	2:09a	2.8	2:55a	2.9			
	10:24a	7:17a	1.4 f	5:33a	1.8	8:16a	7.0	9:07a	7.9			
	5:41p	2:19p	2.0e	11:24a	5.6	3:28p	-0.7	4:05p	-0.8			
	8:42p	1:7f		7:02p	-0.3	10:06p	5.1	10:50p	6.0			
Thu. 2/9	12:23a	3:17a	1.4e	1:09a	4.6	3:06a	2.6	3:53a	2.6			
	5:50a	8:12a	1.5 f	6:31a	1.8	9:08a	7.0	10:00a	8.0			
	11:17a	3:09p	2.0e	12:16p	5.6	4:13p	-0.8	4:51p	-1.0			
	6:27p	9:23p	1.8 f	7:47p	-0.4	10:49p	5.4	11:34p	6.3			
Fri. 2/10	1:09a	4:07a	1.5e	1:55a	4.7	3:59a	2.4	4:45a	2.4			
	6:42a	9:03a	1.5 f	7:24a	1.6	9:57a	7.0	10:50a	8.0			
	12:06p	3:53p	2.0e	1:05p	5.6	4:55p	-0.7	5:34p	-1.0			
	7:08p	10:00p	1.9 f	8:28p	-0.3	11:28p	5.6					
Sat. 2/11	1:50a	4:53a	1.6e	2:38a	4.8	4:49a	2.2	12:14a	6.5			
	7:31a	9:51a	1.5 f	8:15a	1.5	10:45a	6.7	5:34a	2.1			
	12:53p	4:33p	1.9e	1:53p	5.4	5:35p	-0.5	11:37a	7.8			
	7:48p	10:34p	1.9 f	9:05p	-0.2			6:14p	-0.8			
Sun. 2/12	2:27a	5:35a	1.6e	3:18a	4.9	12:06a	5.7	12:52a	6.6			
	8:19a	10:37a	1.5 f	9:04a	1.4	5:37a	2.1	6:21a	1.9			
	1:39p	5:11p	1.8e	2:39p	5.2	11:31a	6.4	12:22p	7.4			
	8:24p	11:09p	1.8 f	9:40p	0.0	6:12p	-0.1	6:52p	-0.4			
Mon. 2/13	3:01a	6:14a	1.6e	3:56a	4.8	12:43a	5.7	1:28a	6.7			
	9:05a	11:23a	1.4 f	9:51a	1.3	6:25a	2.0	7:07a	1.8			
	2:26p	5:47p	1.7e	3:26p	4.9	12:16p	5.9	1:06p	6.9			
	9:00p	11:44p	1.7 f	10:12p	0.3	6:49p	0.4	7:30p	0.1			
Tue. 2/14	3:32a	6:49a	1.5e	4:31a	4.8	1:19a	5.7	2:04a	6.7			
	9:50a	12:10p	1.3 f	10:39a	1.2	7:14a	1.9	7:54a	1.8			
	3:15p	6:25p	1.4e	4:15p	4.5	1:04p	5.4	1:51p	6.4			
	9:35p			10:43p	0.5	7:25p	0.9	8:06p	0.7			
Wed. 2/15	4:00a	12:22a	1.6 f	5:04a	4.7	1:56a	5.7	2:40a	6.6			
	10:38a	7:23a	1.5e	11:30a	1.2	8:07a	1.9	8:42a	1.8			
	4:08p	12:59p	1.2 f	5:10p	4.1	1:55p	4.9	2:39p	5.8			
	10:12p	7:06p	1.2e	11:15p	0.9	8:01p	1.5	8:42p	1.3			

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

	SLACK			CURRENT			TIDE		TIDE		TIDE	
	Time	Time	Knots	Time	Feet	Time	Time	Feet	Time	Feet	Time	Feet
Thu. 2/16	4:30a	1:02a	1.4 f	5:36a	4.6	2:34a	5.6	3:17a	6.5			
	11:30a	7:57a	1.4 e	12:26p	1.1	9:04a	1.9	9:34a	1.8			
	5:08p	1:53p	1.0 f	6:17p	3.7	2:54p	4.3	3:31p	5.2			
	10:53p	7:53p	1.0 e	11:52p	1.2	8:39p	2.0	9:20p	2.0			
Fri. 2/17	5:04a	1:47a	1.2 f	6:12a	4.5	3:15a	5.5	3:56a	6.4			
	12:28p	8:35a	1.3 e	1:31p	1.1	10:09a	1.8	10:32a	1.8			
	6:18p	2:54p	0.9 f	7:34p	3.5	4:09p	4.0	4:33p	4.8			
	11:43p	8:48p	0.8 e			9:23p	2.5	10:02p	2.6			
Sat. 2/18	5:46a	2:37a	1.0 f	12:38a	1.6	4:02a	5.4	4:41a	6.3			
	1:31p	9:23a	1.2 e	6:54a	4.5	11:18a	1.6	11:35a	1.8			
	7:35p	4:04p	0.8 f	2:42p	1.0	5:39p	3.8	5:47p	4.5			
	9:55p	6.0e		8:52p	3.4	10:17p	2.9	10:54p	3.1			
Sun. 2/19	12:48a	3:34a	0.9 f	1:36a	1.9	4:54a	5.4	5:31a	6.3			
	6:39a	10:20a	1.2 e	7:46a	4.5	12:25p	1.3	12:42p	1.6			
	2:33p	5:26p	0.9 f	3:50p	0.8	7:06p	3.9	7:10p	4.4			
	8:49p	11:12p	0.6 e	10:02p	3.6	11:24p	3.2	11:59p	3.4			
Mon. 2/20	2:03a	4:37a	0.8 f	2:43a	2.1	5:49a	5.5	6:27a	6.3			
	7:39a	11:22a	1.2 e	8:46a	4.5	1:22p	1.0	1:44p	1.2			
	3:28p	6:38p	1.0 f	4:49p	0.5	8:11p	4.1	8:28p	4.6			
	9:52p			11:01p	3.8							
Tue. 2/21	3:14a	12:27a	0.7 e	3:51a	2.2	12:32a	3.2	1:09a	3.5			
	8:39a	5:39a	0.9 f	9:43a	4.7	6:43a	5.6	7:24a	6.4			
	4:15p	12:20p	1.3 e	5:38p	0.3	2:09p	0.7	2:37p	0.8			
	10:44p	7:28p	1.2 f	11:50p	4.0	8:56p	4.3	9:25p	4.9			
Wed. 2/22	4:14a	1:27a	0.9 e	4:51a	2.2	1:31a	3.1	2:12a	3.4			
	9:34a	6:36a	0.9 f	10:34a	4.9	7:33a	5.8	8:18a	6.6			
	4:56p	1:10p	1.4 e	6:20p	0.2	2:50p	0.4	3:22p	0.4			
	11:29p	8:04p	1.4 f			9:32p	4.5	10:07p	5.2			
Thu. 2/23	5:05a	2:16a	1.1 e	12:34a	4.2	2:20a	2.9	3:04a	3.2			
	10:23a	7:27a	1.1 f	5:43a	2.1	8:18a	6.0	9:07a	6.9			
	5:32p	1:54p	1.6 e	11:21a	5.0	3:27p	0.1	4:03p	0.1			
	8:33p	1.5 f		6:58p	0.1	10:04p	4.8	10:43p	5.5			
Fri. 2/24	12:08a	3:00a	1.2 e	1:12a	4.4	3:05a	2.7	3:51a	2.8			
	5:51a	8:13a	1.2 f	6:31a	1.9	9:01a	6.2	9:52a	7.1			
	11:08a	2:37p	1.7 e	12:05p	5.2	4:02p	-0.1	4:40p	-0.2			
	6:07p	9:02p	1.7 f	7:32p	0.1	10:34p	5.0	11:17p	5.8			
Sat. 2/25	12:45a	3:39a	1.4 e	1:46a	4.5	3:47a	2.4	4:34a	2.4			
	6:32a	8:56a	1.4 f	7:15a	1.7	9:44a	6.3	10:36a	7.3			
	11:52a	3:20p	1.9 e	12:49p	5.2	4:36p	-0.2	5:16p	-0.4			
	6:43p	9:33p	1.8 f	8:04p	0.1	11:04p	5.3	11:50p	6.1			
Sun. 2/26	1:18a	4:17a	1.5 e	2:17a	4.6	4:29a	2.1	5:17a	2.0			
	7:12a	9:39a	1.5 f	7:58a	1.4	10:26a	6.3	11:19a	7.3			
	12:37p	4:03p	2.0 e	1:33p	5.3	5:10p	-0.1	5:52p	-0.4			
	7:19p	10:07p	1.9 f	8:34p	0.1	11:35p	5.5					
Mon. 2/27	1:50a	4:54a	1.7 e	2:45a	4.7	5:13a	1.7	12:23a	6.4			
	7:51a	10:21a	1.6 f	8:42a	1.2	11:10a	6.2	6:00a	1.6			
	1:23p	4:48p	2.0 e	2:19p	5.2	5:45p	0.1	12:03p	7.2			
	7:57p	10:44p	1.9 f	9:05p	0.2			6:28p	-0.2			
Tue. 2/28	2:19a	5:31a	1.7 e	3:12a	4.8	12:08a	5.7	12:57a	6.7			
	8:31a	11:05a	1.7 f	9:26a	0.9	5:59a	1.4	6:45a	1.3			
	2:13p	5:34p	1.9 e	3:08p	5.0	11:58a	5.9	12:49p	7.0			
	8:38p	11:23p	1.9 f	9:38p	0.3	6:21p	0.4	7:04p	0.1			
Wed. 3/1	2:49a	6:09a	1.8 e	3:42a	5.0	12:43a	5.9	1:33a	6.9			
	9:15a	11:52a	1.7 f	10:14a	0.7	6:50a	1.2	7:32a	1.0			
	3:07p	6:23p	1.7 e	4:00p	4.6	12:49p	5.5	1:39p	6.6			
	9:21p			10:15p	0.5	6:59p	0.8	7:43p	0.6			
Thu. 3/2	3:23a	12:06a	1.8 f	4:16a	5.0	1:21a	6.0	2:11a	7.1			
	10:04a	6:51a	1.8 e	11:07a	0.6	7:45a	1.0	8:24a	0.8			
	4:07p	12:43p	1.6 f	5:01p	4.3	1:47p	5.0	2:34p	6.1			
	10:09p	7:15p	1.5 e	10:57p	0.8	7:40p	1.3	8:24p	1.2			
Fri. 3/3	4:02a	12:53a	1.6 f	4:56a	5.1	2:04a	6.1	2:53a	7.1			
	11:00a	7:37a	1.7 e	12:10p	0.6	8:47a	0.8	9:22a	0.7			
	5:16p	1:39p	1.4 f	6:15p	3.9	2:56p	4.6	3:37p	5.5			
	11:03p	8:14p	1.3 e	11:46p	1.2	8:27p	1.9	9:11p	1.8			
Sat. 3/4	4:50a	1:46a	1.5 f	5:45a	5.0	2:54a	6.1	3:41a	7.1			
	12:06p	8:31a	1.6 e	1:24p	0.5	9:57a	0.6	10:26a	0.6			
	6:36p	2:44p	1.3 f	7:39p	3.7	4:18p	4.2	4:50p	5.1			
	9:22p	1.1e				9:24p	2.4	10:07p	2.4			
Sun. 3/5	12:08a	2:46a	1.3 f	12:46a	1.5	3:51a	6.1	4:37a	7.1			
	5:49a	9:36a	1.6 e	6:45a	4.9	11:11a	0.4	11:37a	0.5			
	1:19p	3:59p	1.2 f	2:44p	0.4	5:47p	4.2	6:12p	4.9			
	7:59p	10:42p	1.0 e	9:01p	3.7	10:35p	2.7	11:15p	2.8			
Mon. 3/6	1:22a	3:51a	1.2 f	2:00a	1.8	4:57a	6.1	5:42a	7.0			
	6:58a	10:50a	1.6 e	7:58a	4.9	12:22p	0.2	12:49p	0.3			
	2:31p	5:28p	1.2 f	3:57p	0.2	7:08p	4.3	7:36p	5.0			
	9:16p			10:10p	4.0	11:54p	2.8					
Tue. 3/7	2:37a	12:02a	1.0 e	3:19a	1.8	6:05a	6.1	12:33a	3.0			
	8:11a	5:00a	1.1 f	9:15a	4.9	1:25p	-0.1	6:51a	7.0			
	3:36p	12:07p	1.6 e	5:00p	0.0	8:11p	4.6	1:56p	0.0			
	10:20p	6:50p	1.4 f	11:09p	4.2			8:47p	5.3			
Wed. 3/8	3:45a	1:11a	1.2 e	4:31a	1.7	1:09a	2.7	1:48a	2.9			
	9:18a	6:07a	1.2 f	10:24a	5.0	7:11a	6.1	7:58a	7.0			
	4:32p	1:13p	1.7 e	5:53p	-0.2	2:20p	-0.3	2:54p	-0.2			
	11:13p	7:46p	1.5 f			9:00p	4.9	9:42p	5.7			
Thu. 3/9	4:46a	2:10a	1.4 e	12:00a	4.5	2:12a	2.4	2:53a	2.5			
	10:17a	7:08a	1.3 f	5:33a	1.5	8:10a	6.2	8:59a	7.1			
	5:21p	2:08p	1.8 e	11:23a	5.1	3:08p	-0.4	3:44p	-0.4			
	11:59p	8:27p	1.7 f	6:39p	-0.2	9:42p	5.2	10:26p	6.0			
Fri. 3/10	5:39a	3:02a	1.6 e	12:45a	4.7	3:07a	2.0	3:48a	2.1			
	11:10a	8:02a	1.4 f	6:28a	1.3	9:04a	6.2	9:53a	7.2			
	6:04p	2:54p	1.8 e	12:15p	5.1	3:50p	-0.3	4:29p	-0.4			
	9:01p	1.7 f		7:20p	-0.1	10:19p	5.4	11:05p	6.3			

**SAN MATEO
CURRENTS**
**PORT
CHICAGO**
**ARENA
COVE**
**HUMBOLDT
BAY**

	SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots			Time	Feet	Time	Feet	Time	Feet
Sat. 3/11	12:39a	3:48a	1.7e			1:26a	4.9	3:55a	1.7	4:38a	1.7
	6:28a	8:51a	1.5f			7:18a	1.1	9:52a	6.1	10:43a	7.1
	11:59a	3:36p	1.8e			1:03p	5.1	4:29p	-0.1	5:09p	-0.3
	6:44p	9:32p	1.8f			7:57p	0.0	10:53p	5.5	11:41p	6.5
Sun. 3/12	2:14a	5:29a	1.7e			3:04a	4.9	5:40a	1.4	6:22a	1.3
	8:14a	10:36a	1.6f			9:05a	0.9	11:38a	5.9	12:28p	7.0
	1:46p	5:14p	1.7e			2:48p	4.9	6:06p	0.2	6:47p	-0.1
	8:21p	11:02p	1.7f			9:31p	0.2				
Mon. 3/13	2:44a	6:06a	1.7e			3:38a	4.9	12:26a	5.6	1:14a	6.6
	8:56a	11:20a	1.6f			9:50a	0.8	6:23a	1.2	7:05a	1.0
	2:31p	5:49p	1.6e			3:33p	4.7	12:23p	5.6	1:12p	6.7
	8:56p	11:34p	1.7f			10:01p	0.5	6:40p	0.5	7:22p	0.3
Tue. 3/14	3:11a	6:38a	1.7e			4:08a	4.9	12:57a	5.6	1:46a	6.6
	9:38a	12:02p	1.5f			10:32a	0.7	7:05a	1.1	7:46a	0.9
	3:17p	6:24p	1.5e			4:18p	4.5	1:07p	5.3	1:54p	6.4
	9:30p					10:30p	0.7	7:13p	1.0	7:56p	0.8
Wed. 3/15	3:35a	12:08a	1.6f			4:33a	4.8	1:28a	5.6	2:17a	6.6
	10:18a	7:05a	1.6e			11:14a	0.7	7:47a	1.0	8:27a	0.8
	4:04p	12:45p	1.4f			5:06p	4.2	1:52p	4.9	2:37p	6.0
	10:03p	7:01p	1.3e			10:58p	1.0	7:45p	1.4	8:30p	1.3
Thu. 3/16	3:59a	12:44a	1.4f			4:56a	4.7	2:00a	5.5	2:48a	6.5
	11:00a	7:31a	1.5e			11:57a	0.7	8:32a	1.0	9:09a	0.9
	4:53p	1:30p	1.3f			5:59p	3.9	2:41p	4.5	3:21p	5.5
	10:37p	7:41p	1.1e			11:30p	1.3	8:19p	1.9	9:04p	1.9
Fri. 3/17	4:26a	1:23a	1.3f			5:20a	4.7	2:33a	5.4	3:21a	6.4
	11:44a	8:01a	1.4e			12:44p	0.7	9:21a	1.0	9:54a	1.0
	5:48p	2:18p	1.1f			7:00p	3.7	3:37p	4.1	4:11p	5.1
	11:17p	8:25p	0.9e					8:55p	2.3	9:39p	2.4
Sat. 3/18	5:01a	2:07a	1.1f			12:07a	1.6	3:11a	5.2	3:58a	6.2
	12:35p	8:37a	1.3e			5:51a	4.6	10:16a	1.1	10:43a	1.1
	6:50p	3:12p	1.0f			1:40p	0.8	4:45p	3.9	5:07p	4.8
	9:18p	0.7e				8:11p	3.5	9:39p	2.7	10:20p	2.8
Sun. 3/19	12:07a	2:57a	0.9f			12:55a	1.9	3:55a	5.1	4:40a	6.0
	5:45a	9:23a	1.2e			6:32a	4.5	11:18a	1.1	11:40a	1.2
	1:32p	4:14p	0.9f			2:46p	0.8	6:07p	3.7	6:14p	4.5
	7:59p	10:21p	0.6e			9:25p	3.5	10:36p	3.0	11:12p	3.2
Mon. 3/20	1:14a	3:55a	0.8f			1:55a	2.1	4:50a	4.9	5:32a	5.8
	6:42a	10:18a	1.1e			7:25a	4.3	12:24p	1.0	12:43p	1.2
	2:34p	5:25p	0.8f			3:57p	0.7	7:27p	3.8	7:30p	4.5
	9:08p	11:35p	0.7e			10:31p	3.6	11:51p	3.1		
Tue. 3/21	2:34a	5:00a	0.7f			3:10a	2.2	5:53a	4.9	12:22a	3.4
	7:50a	11:22a	1.1e			8:34a	4.2	1:26p	0.8	6:34a	5.7
	3:31p	6:36p	1.0f			4:59p	0.5	8:28p	4.0	1:48p	1.1
	10:09p					11:27p	3.8			8:42p	4.6
Wed. 3/22	3:47a	12:48a	0.8e			4:25a	2.1	1:07a	3.0	1:39a	3.4
	8:59a	6:05a	0.8f			9:53a	4.2	6:59a	5.0	7:40a	5.8
	4:22p	12:26p	1.2e			5:51p	0.4	2:19p	0.6	2:47p	0.8
	11:00p	7:30p	1.1f					9:11p	4.3	9:38p	4.9
Thu. 3/23	4:47a	1:49a	1.0e			12:14a	4.0	2:10a	2.8	2:46a	3.1
	10:02a	7:06a	0.9f			5:29a	1.9	7:58a	5.1	8:42a	6.0
	5:06p	1:25p	1.4e			11:02a	4.4	3:04p	0.3	3:37p	0.5
	11:44p	8:10p	1.3f			6:35p	0.2	9:45p	4.5	10:21p	5.2
Fri. 3/24	5:38a	2:39a	1.2e			12:54a	4.2	3:01a	2.4	3:42a	2.7
	10:58a	8:00a	1.1f			6:24a	1.6	8:52a	5.4	9:39a	6.2
	5:48p	2:18p	1.5e			11:59a	4.5	3:44p	0.2	4:21p	0.2
	8:45p	1:45p	1.5f			7:13p	0.2	10:16p	4.8	10:58p	5.6
Sat. 3/25	12:23a	3:22a	1.4e			1:29a	4.4	3:46a	2.0	4:30a	2.1
	6:22a	8:48a	1.3f			7:12a	1.3	9:41a	5.6	10:30a	6.5
	11:49a	3:07p	1.7e			12:50p	4.7	4:21p	0.1	5:01p	0.0
	6:29p	9:20p	1.7f			7:48p	0.2	10:46p	5.1	11:32p	6.0
Sun. 3/26	12:58a	4:02a	1.6e			2:00a	4.6	4:30a	1.5	5:15a	1.5
	7:04a	9:34a	1.5f			7:58a	1.0	10:28a	5.7	11:19a	6.7
	12:39p	3:56p	1.8e			1:39p	4.8	4:58p	0.1	5:40p	0.0
	7:11p	9:57p	1.8f			8:21p	0.2	11:17p	5.5		
Mon. 3/27	1:30a	4:41a	1.8e			2:28a	4.7	5:14a	1.0	12:06a	6.4
	7:44a	10:18a	1.7f			8:43a	0.7	11:16a	5.7	5:59a	0.9
	1:29p	4:44p	1.9e			2:28p	4.8	5:34p	0.2	12:07p	6.8
	7:52p	10:35p	1.9f			8:55p	0.3	11:49p	5.8	6:18p	0.0
Tue. 3/28	2:02a	5:20a	1.9e			2:55a	4.9	5:59a	0.5	12:40a	6.8
	8:25a	11:02a	1.9f			9:28a	0.4	12:05p	5.6	6:43a	0.3
	2:20p	5:33p	1.9e			3:18p	4.8	6:11p	0.4	12:56p	6.7
	8:35p	11:15p	1.9f			9:30p	0.5			6:57p	0.3
Wed. 3/29	2:33a	6:00a	2.0e			3:25a	5.1	12:24a	6.0	1:16a	7.1
	9:07a	11:48a	1.9f			10:14a	0.1	6:46a	0.1	7:29a	-0.2
	3:13p	6:23p	1.8e			4:10p	4.6	12:57p	5.4	1:46p	6.6
	9:19p	11:57p	1.9f			10:08p	0.7	6:50p	0.8	7:37p	0.7
Thu. 3/30	3:08a	6:41a	2.0e			3:58a	5.3	1:01a	6.2	1:53a	7.3
	9:53a	12:36p	1.9f			11:03a	0.0	7:36a	-0.2	8:17a	-0.5
	4:10p	7:14p	1.7e			5:07p	4.4	1:52p	5.1	2:39p	6.2
	10:06p					10:49p	0.9	7:31p	1.3	8:18p	1.1
Fri. 3/31	3:47a	12:43a	1.7f			4:36a	5.3	1:42a	6.2	2:34a	7.4
	10:44a	7:25a	2.0e			11:57a	-0.1	8:30a	-0.4	9:08a	-0.6
	5:11p	1:27p	1.7f			6:11p	4.1	2:53p	4.7	3:36p	5.9
	10:57p	8:09p	1.5e			11:37p	1.2	8:17p	1.7	9:04p	1.7
Sat. 4/1	4:32a	1:32a	1.6f			5:20a	5.2	2:28a	6.1	3:19a	7.3
	11:41a	8:14a	1.8e			12:58p	0.0	9:30a	-0.4	10:04a	-0.5
	6:19p	2:24p	1.6f			7:22p	3.9	4:03p	4.4	4:39p	5.5
	11:55p	9:09p	1.3e					9:11p	2.2	9:56p	2.2
Sun. 4/2	5:26a	2:27a	1.4f			12:32a	1.5	3:21a	5.9	4:11a	7.0
	12:46p	9:10a	1.7e			6:12a	5.0	10:35a	-0.3	11:05a	-0.3
	7:33p	3:29p	1.4f			2:07p	0.0	5:21p	4.3	5:50p	5.2
	10:19p	1:1e				8:38p	3.8	10:17p	2.5	10:58p	2.6

**SAN MATEO
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	SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots			Time	Feet			Time	Feet
Mon. 4/3	1:03a	3:29a	1.2 f			1:40a	1.7			4:23a	5.7
	6:30a	10:16a	1.6 e			7:17a	4.7			5:11a	6.7
	1:56p	4:47p	1.3 f			3:21p	0.0			12:12p	-0.2
	8:48p	11:37p	1.1 e			9:49p	3.9			7:06p	5.1
Tue. 4/4	2:18a	4:37a	1.1 f			3:00a	1.8			12:13a	2.9
	7:44a	11:32a	1.5 e			8:39a	4.4			6:21a	6.4
	3:07p	6:18p	1.3 f			4:30p	-0.1			1:22p	0.0
	9:57p					10:52p	4.1			8:20p	5.3
Wed. 4/5	3:32a	12:52a	1.2 e			4:19a	1.6			1:34a	2.8
	9:00a	5:49a	1.1 f			10:06a	4.3			7:35a	6.2
	4:10p	12:49p	1.5 e			5:30p	-0.1			2:28p	0.0
	10:55p	7:30p	1.4 f			11:46p	4.4			9:22p	5.5
Thu. 4/6	4:38a	1:57a	1.4 e			5:29a	1.3			2:48a	2.4
	10:09a	6:58a	1.1 f			11:17a	4.4			8:46a	6.1
	5:04p	1:54p	1.5 e			6:21p	-0.2			3:26p	0.0
	11:43p	8:20p	1.5 f			7:06p	-0.1			10:12p	5.8
Fri. 4/7	5:35a	2:52a	1.5 e			12:33a	4.6			3:50a	1.9
	11:10a	8:00a	1.3 f			6:29a	0.9			9:50a	6.1
	5:53p	2:49p	1.6 e			12:17p	4.4			4:15p	0.1
	8:58p	1:58p	1.6 f			7:06p	-0.1			10:53p	6.1
Sat. 4/8	12:25a	3:41a	1.7 e			1:15a	4.8			4:42a	1.3
	6:26a	8:53a	1.4 f			7:22a	0.6			10:46a	6.2
	12:04p	3:35p	1.6 e			1:09p	4.4			4:59p	0.2
	6:36p	9:28p	1.6 f			7:45p	0.1			11:29p	6.4
Sun. 4/9	1:00a	4:23a	1.8 e			1:53a	4.9			5:27a	0.9
	7:11a	9:40a	1.5 f			8:09a	0.4			11:35a	6.1
	12:54p	4:17p	1.5 e			1:57p	4.4			5:38p	0.5
	7:16p	9:58p	1.6 f			8:20p	0.3				
Mon. 4/10	1:29a	5:01a	1.8 e			2:26a	4.9			12:02a	6.5
	7:53a	10:23a	1.6 f			8:54a	0.3			6:08a	0.5
	1:41p	4:55p	1.5 e			2:43p	4.3			12:20p	6.1
	7:54p	10:28p	1.5 f			8:52p	0.6			6:14p	0.8
Tue. 4/11	1:55a	5:33a	1.7 e			2:54a	4.9			12:32a	6.6
	8:33a	11:03a	1.6 f			9:36a	0.2			6:47a	0.2
	2:27p	5:31p	1.3 e			3:28p	4.2			1:03p	5.9
	8:29p	11:00p	1.5 f			9:21p	0.9			6:49p	1.1
Wed. 4/12	2:18a	6:00a	1.7 e			3:17a	4.9			1:02a	6.6
	9:11a	11:43a	1.6 f			10:15a	0.2			7:25a	0.0
	3:12p	6:07p	1.2 e			4:14p	4.1			1:44p	5.7
	9:02p	11:34p	1.4 f			9:50p	1.2			7:22p	1.5
Thu. 4/13	2:41a	6:23a	1.6 e			3:37a	4.8			1:31a	6.6
	9:48a	12:23p	1.5 f			10:53a	0.1			8:02a	0.0
	3:57p	6:43p	1.1 e			5:02p	3.9			2:26p	5.5
	9:36p					10:20p	1.4			7:56p	1.9
Fri. 4/14	3:06a	12:11a	1.3 f			3:58a	4.8			2:01a	6.5
	10:25a	6:47a	1.6 e			11:31a	0.2			8:40a	0.0
	4:43p	1:04p	1.3 f			5:52p	3.8			3:10p	5.3
	10:11p	7:22p	1.0 e			10:54p	1.6			8:30p	2.3
Sat. 4/15	3:36a	12:51a	1.2 f			4:25a	4.8			2:33a	6.3
	11:02a	7:18a	1.5 e			12:10p	0.2			9:20a	0.1
	5:31p	1:47p	1.2 f			6:48p	3.6			3:57p	5.0
	10:53p	8:06p	0.9 e			11:35p	1.8			9:06p	2.7
Sun. 4/16	4:13a	1:34a	1.0 f			5:00a	4.7			3:07a	6.1
	11:43a	7:55a	1.4 e			12:54p	0.3			10:05a	0.3
	6:24p	2:33p	1.1 f			7:50p	3.5			4:49p	4.8
	11:45p	8:56p	0.8 e							9:48p	3.0
Mon. 4/17	4:57a	2:24a	0.9 f			12:25a	2.0			3:48a	5.8
	12:28p	8:40a	1.3 e			5:42a	4.4			10:54a	0.5
	7:23p	3:25p	1.0 f			1:47p	0.3			5:49p	4.6
	9:54p	6:08p				8:54p	3.5			10:42p	3.3
Tue. 4/18	12:51a	3:22a	0.8 f			1:26a	2.1			4:38a	5.6
	5:53a	9:33a	1.2 e			6:35a	4.2			11:50a	0.6
	1:21p	4:24p	1.0 f			2:50p	0.3			6:52p	4.6
	8:24p	11:00p	0.8 e			9:54p	3.6			11:53p	3.3
Wed. 4/19	2:07a	4:25a	0.7 f			2:41a	2.1			5:42a	5.3
	7:01a	10:34a	1.2 e			7:42a	3.9			12:51p	0.7
	2:19p	5:24p	1.0 f			3:53p	0.3			7:53p	4.8
	9:20p					10:46p	3.8				
Thu. 4/20	3:17a	12:06a	0.9 e			3:58a	1.9			1:10a	3.2
	8:17a	5:31a	0.8 f			9:06a	3.8			6:54a	5.3
	3:17p	11:39a	1.2 e			4:48p	0.3			1:50p	0.6
	10:10p	6:20p	1.2 f			11:30p	4.0			8:45p	5.1
Fri. 4/21	4:16a	1:05a	1.1 e			5:05a	1.5			2:19a	2.7
	9:29a	6:33a	0.9 f			10:29a	3.8			8:04a	5.3
	4:11p	12:43p	1.3 e			5:36p	0.2			2:44p	0.5
	10:52p	7:10p	1.4 f							9:29p	5.5
Sat. 4/22	5:06a	1:55a	1.3 e			12:07a	4.2			3:17a	2.1
	10:33a	7:30a	1.1 f			6:02a	1.1			9:09a	5.5
	5:02p	1:43p	1.5 e			11:36a	4.0			3:32p	0.4
	11:31p	7:55p	1.5 f			6:18p	0.2			10:08p	5.9
Sun. 4/23	5:51a	2:40a	1.6 e			12:40a	4.4			4:07a	1.3
	11:32a	8:22a	1.4 f			6:53a	0.7			10:08a	5.8
	5:51p	2:39p	1.6 e			12:34p	4.1			4:18p	0.4
	8:38p	1:7f				6:57p	0.3			10:45p	6.4
Mon. 4/24	12:06a	3:23a	1.8 e			1:09a	4.7			4:54a	0.5
	6:34a	9:11a	1.7 f			7:41a	0.3			11:03a	6.0
	12:28p	3:34p	1.7 e			1:29p	4.2			5:01p	0.5
	6:39p	9:21p	1.8 f			7:35p	0.5			11:22p	6.9
Tue. 4/25	12:41a	4:05a	1.9 e			1:38a	5.0			5:40a	-0.2
	7:18a	9:58a	1.9 f			8:28a	-0.1			11:57a	6.2
	1:23p	4:27p	1.8 e			2:23p	4.3			5:43p	0.7
	7:26p	10:04p	1.8 f			8:14p	0.7			11:59p	7.3

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

SLACK	CURRENT		TIDE		TIDE		TIDE		
	Time	Time	Knots	Time	Feet	Time	Feet	Time	Feet
Wed. 4/26	1:16a	4:48a	2.1e	2:09a	5.2	5:45a	-0.7	6:27a	-0.9
	8:02a	10:45a	2.0 f	9:16a	-0.3	12:02p	5.0	12:49p	6.2
	2:18p	5:20p	1.8e	3:17p	4.3	5:37p	1.0	6:26p	1.0
	8:14p	10:48p	1.8 f	8:56p	0.9	11:45p	6.4		
Thu. 4/27	1:53a	5:32a	2.1e	2:44a	5.4	6:33a	-1.1	12:38a	7.5
	8:48a	11:32a	2.0 f	10:04a	-0.5	12:57p	4.9	7:14a	-1.3
	3:13p	6:13p	1.7e	4:13p	4.3	6:21p	1.3	1:43p	6.1
	9:02p	11:34p	1.8 f	9:40p	1.1			7:10p	1.3
Fri. 4/28	2:34a	6:18a	2.1e	3:23a	5.5	12:27a	6.5	1:20a	7.7
	9:36a	12:21p	2.0 f	10:55a	-0.6	7:23a	-1.4	8:02a	-1.6
	4:11p	7:07p	1.6e	5:12p	4.2	1:55p	4.7	2:38p	6.0
	9:52p			10:29p	1.3	7:08p	1.7	7:57p	1.7
Sat. 4/29	3:20a	12:23a	1.7 f	4:06a	5.4	1:11a	6.4	2:04a	7.6
	10:28a	7:05a	2.1e	11:48a	-0.6	8:16a	-1.4	8:53a	-1.6
	5:11p	1:13p	1.8 f	6:14p	4.1	2:56p	4.6	3:35p	5.8
	10:47p	8:03p	1.4e	11:23p	1.5	8:00p	2.0	8:48p	2.1
Sun. 4/30	4:10a	1:14a	1.5 f	4:54a	5.2	2:01a	6.1	2:53a	7.3
	11:23a	7:56a	1.9e	12:46p	-0.6	9:13a	-1.2	9:47a	-1.3
	6:15p	2:10p	1.7 f	7:19p	4.0	4:02p	4.5	4:37p	5.6
	11:48p	9:04p	1.3e			9:01p	2.3	9:46p	2.5
Mon. 5/1	5:07a	2:11a	1.3 f	12:25a	1.6	2:56a	5.7	3:48a	6.9
	12:23p	8:52a	1.7e	5:49a	4.8	10:13a	-1.0	10:45a	-1.0
	7:20p	3:14p	1.5 f	1:47p	-0.4	5:12p	4.4	5:41p	5.5
	10:11p	1:2e		8:25p	4.0	10:15p	2.5	10:53p	2.7
Tue. 5/2	12:57a	3:13a	1.1 f	1:37a	1.7	4:01a	5.3	4:51a	6.3
	6:13a	9:54a	1.6e	6:58a	4.4	11:17a	-0.7	11:47a	-0.6
	1:28p	4:26p	1.4 f	2:51p	-0.3	6:19p	4.5	6:48p	5.5
	8:26p	11:23p	1.2e	9:27p	4.1	11:38p	2.4		
Wed. 5/3	2:10a	4:22a	1.0 f	2:55a	1.5	5:15a	4.9	12:10a	2.7
	7:27a	11:05a	1.4e	8:24a	4.0	12:20p	-0.4	6:01a	5.9
	2:32p	5:42p	1.4 f	3:54p	-0.2	7:19p	4.7	12:50p	-0.2
	9:26p			10:25p	4.3			7:51p	5.6
Thu. 5/4	3:21a	12:33a	1.3e	4:11a	1.2	1:00a	-2.1	1:29a	2.4
	8:43a	5:35a	1.0 f	9:51a	3.8	6:34a	4.6	7:16a	5.5
	3:33p	12:19p	1.3e	4:50p	-0.2	1:20p	-0.1	1:52p	0.2
	10:19p	6:48p	1.4 f	11:16p	4.5	8:10p	5.0	8:47p	5.9
Fri. 5/5	4:24a	1:34a	1.5e	5:20a	0.8	2:10a	1.6	2:40a	1.9
	9:55a	6:46a	1.1 f	11:04a	3.8	7:49a	4.4	8:30a	5.3
	4:29p	1:26p	1.3e	5:41p	0.0	2:14p	0.2	2:48p	0.5
	11:04p	7:37p	1.4 f			8:53p	5.2	9:33p	6.1
Sat. 5/6	5:19a	2:27a	1.7e	12:01a	4.7	3:08a	1.1	3:40a	1.3
	10:59a	7:49a	1.2 f	6:19a	0.4	8:55a	4.3	9:37a	5.3
	5:19p	2:23p	1.3e	12:05p	3.8	3:01p	0.5	3:38p	0.7
	11:42p	8:15p	1.4 f	6:24p	0.2	9:30p	5.3	10:13p	6.3
Sun. 5/7	6:07a	3:14a	1.8e	12:41a	4.9	3:56a	0.7	4:29a	0.8
	11:57a	8:42a	1.4 f	7:10a	0.1	9:53a	4.3	10:35a	5.3
	6:05p	3:13p	1.3e	12:59p	3.8	3:42p	0.9	4:22p	1.0
	8:49p	1:4 f		7:04p	0.4	10:03p	5.5	10:48p	6.5
Mon. 5/8	12:14a	3:55a	1.8e	1:16a	4.9	4:38a	0.2	5:12a	0.3
	6:51a	9:29a	1.5 f	7:57a	-0.1	10:44a	4.3	11:27a	5.3
	12:50p	3:58p	1.3e	1:49p	3.9	4:20p	1.2	5:02p	1.3
	6:47p	9:22p	1.4 f	7:39p	0.8	10:33p	5.6	11:21p	6.6
Tue. 5/9	12:42a	4:30a	1.8e	1:45a	5.0	5:16a	-0.1	5:51a	-0.1
	7:32a	10:11a	1.6 f	8:41a	-0.2	11:31a	4.3	12:13p	5.3
	1:39p	4:39p	1.2e	2:37p	3.9	4:54p	1.5	5:40p	1.6
	7:27p	9:55p	1.3 f	8:12p	1.1	11:02p	5.6	11:51p	6.7
Wed. 5/10	1:07a	4:59a	1.7e	2:10a	4.9	5:52a	-0.3	6:28a	-0.4
	8:11a	10:50a	1.6 f	9:22a	-0.3	12:15p	4.2	12:56p	5.3
	2:25p	5:17p	1.1e	3:24p	3.9	5:27p	1.8	6:15p	1.9
	8:04p	10:30p	1.3 f	8:43p	1.4	11:30p	5.6		
Thu. 5/11	1:32a	5:24a	1.7e	2:30a	4.9	6:28a	-0.5	12:21a	6.7
	8:48a	11:28a	1.6 f	10:00a	-0.3	12:58p	4.2	7:04a	-0.5
	3:09p	5:54p	1.1e	4:10p	3.8	6:00p	2.0	1:37p	5.3
	8:40p	11:06p	1.2 f	9:16p	1.6	11:59p	5.5	6:50p	2.2
Fri. 5/12	1:58a	5:47a	1.7e	2:50a	5.0	7:03a	-0.5	12:51a	6.6
	9:23a	12:04p	1.5 f	10:36a	-0.2	1:41p	4.1	7:40a	-0.6
	3:51p	6:30p	1.0e	4:57p	3.8	6:34p	2.3	2:18p	5.2
	9:16p	11:44p	1.2 f	9:50p	1.8			7:25p	2.5
Sat. 5/13	2:28a	6:14a	1.6e	3:16a	5.0	12:29a	5.4	1:22a	6.5
	9:56a	12:41p	1.4 f	11:10a	-0.2	7:40a	-0.5	8:16a	-0.5
	4:33p	7:09p	1.0e	5:45p	3.8	2:27p	4.0	3:00p	5.1
	9:55p			10:29p	2.0	7:11p	2.5	8:01p	2.8
Sun. 5/14	3:01a	12:25a	1.1 f	3:48a	4.9	1:02a	5.3	1:55a	6.3
	10:27a	6:47a	1.5e	11:44a	-0.2	8:20a	-0.4	8:54a	-0.4
	5:15p	1:19p	1.3 f	6:34p	3.7	3:15p	4.0	3:44p	5.0
	10:38p	7:51p	0.9e	11:13p	2.0	7:52p	2.7	8:40p	3.0
Mon. 5/15	3:39a	1:09a	1.0 f	4:27a	4.7	1:38a	5.1	2:30a	6.1
	11:00a	7:25a	1.5e	12:20p	-0.2	9:02a	-0.3	9:35a	-0.3
	6:00p	1:59p	1.2 f	7:25p	3.7	4:08p	3.9	4:32p	4.9
	11:30p	8:37p	0.9e			8:40p	2.8	9:25p	3.2
Tue. 5/16	4:22a	1:57a	0.9 f	12:03a	2.1	2:19a	4.8	3:10a	5.8
	11:37a	8:09a	1.4e	5:12a	4.5	9:48a	-0.2	10:19a	-0.1
	6:47p	2:44p	1.2 f	1:00p	-0.1	5:03p	4.0	5:23p	4.9
	9:28p	9:09p	0.9e	8:17p	3.6	9:42p	2.9	10:19p	3.2
Wed. 5/17	12:30a	2:52a	0.8 f	1:03a	2.0	3:09a	4.5	3:58a	5.5
	5:15a	8:59a	1.3e	6:04a	4.1	10:38a	0.0	11:07a	0.1
	12:22p	3:34p	1.2 f	1:48p	0.0	5:55p	4.1	6:15p	5.0
	7:37p	10:24p	1.0e	9:08p	3.7	10:55p	2.9	11:26p	3.2
Thu. 5/18	1:36a	3:52a	0.7 f	2:13a	1.9	4:11a	4.3	5:00a	5.2
	6:20a	9:57a	1.2e	7:09a	3.8	11:29a	0.2	12:00p	0.3
	1:16p	4:28p	1.2 f	2:42p	0.0	6:42p	4.3	7:06p	5.2
	8:26p	11:22p	1.1e	9:55p	3.8				

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

SLACK	CURRENT		TIDE		TIDE		TIDE		
	Time	Time	Knots	Time	Feet	Time	Feet	Time	Feet
Fri. 5/19	2:41a	4:55a	0.8 f	3:27a	1.6	12:11a	2.6	12:40a	2.9
	7:38a	11:01a	1.2 e	8:29a	3.5	5:25a	4.1	6:12a	5.0
	2:17p	5:24p	1.3 f	3:37p	0.1	12:21p	0.3	12:55p	0.5
	9:13p			10:37p	4.0	7:22p	4.6	7:54p	5.5
Sat. 5/20	3:39a	12:18a	1.2 e	4:37a	1.2	1:18a	2.1	1:49a	2.4
	8:59a	5:59a	0.9 f	9:57a	3.5	6:43a	4.0	7:28a	4.9
	3:19p	12:07p	1.2 e	4:29p	0.2	1:12p	0.4	1:49p	0.7
	9:56p	6:18p	1.4 f	11:14p	4.3	7:59p	5.0	8:38p	5.9
Sun. 5/21	4:32a	1:10a	1.5 e	5:38a	0.8	2:16a	1.4	2:50a	1.6
	10:12a	7:00a	1.2 f	11:14a	3.5	7:56a	4.1	8:40a	5.0
	4:19p	1:12p	1.3 e	5:18p	0.4	2:00p	0.6	2:42p	0.8
	10:36p	7:10p	1.5 f	11:47p	4.7	8:36p	5.4	9:19p	6.4
Mon. 5/22	5:21a	1:59a	1.7 e	6:34a	0.3	3:07a	0.6	3:44a	0.7
	11:18a	7:56a	1.5 f	12:19p	3.7	9:03a	4.2	9:47a	5.2
	5:16p	2:15p	1.4 e	6:04p	0.6	2:47p	0.8	3:33p	1.0
	11:16p	8:00p	1.6 f			9:13p	5.8	10:00p	6.9
Tue. 5/23	6:08a	2:46a	1.9 e	12:20a	5.0	3:56a	0.2	4:34a	-0.2
	12:20p	8:49a	1.7 f	7:25a	-0.1	10:05a	4.4	10:50a	5.4
	6:10p	3:15p	1.5 e	1:20p	3.8	3:34p	1.0	4:22p	1.2
	11:56p	8:49p	1.7 f	6:50p	0.9	9:52p	6.3	10:42p	7.4
Wed. 5/24	6:56a	3:34a	2.1 e	12:54a	5.3	4:44a	-0.9	5:23a	-1.0
	1:18p	9:40a	1.9 f	8:16a	-0.5	11:03a	4.5	11:48a	5.7
	7:03p	4:13p	1.6 e	2:18p	4.0	4:20p	1.3	5:10p	1.4
		9:37p	1.7 f	7:38p	1.1	10:32p	6.6	11:24p	7.8
Thu. 5/25	12:39a	4:22a	2.2 e	1:32a	5.6	5:32a	-1.5	6:11a	-1.6
	7:44a	10:30a	2.0 f	9:06a	-0.7	11:59a	4.6	12:44p	5.8
	2:15p	5:10p	1.6 e	3:15p	4.1	5:07p	1.5	5:59p	1.7
	7:55p	10:25p	1.8 f	8:27p	1.4	11:15p	6.8		
Fri. 5/26	1:23a	5:11a	2.2 e	2:13a	5.7	6:20a	-1.8	12:08a	8.0
	8:33a	11:19a	2.1 f	9:56a	-0.9	12:55p	4.7	6:59a	-2.0
	3:11p	6:05p	1.6 e	4:12p	4.1	5:57p	1.8	1:38p	5.9
	8:47p	11:15p	1.7 f	9:19p	1.5			6:48p	1.9
Sat. 5/27	2:11a	5:59a	2.2 e	2:57a	5.7	12:01a	6.8	12:54a	8.0
	9:22a	12:09p	2.0 f	10:46a	-0.9	7:10a	-2.0	7:48a	-2.1
	4:07p	7:00p	1.6 e	5:09p	4.2	1:51p	4.7	2:33p	5.9
	9:40p			10:14p	1.6	6:49p	2.0	7:40p	2.1
Sun. 5/28	3:00a	12:05a	1.6 f	3:45a	5.6	12:49a	6.6	1:42a	7.8
	10:12a	6:49a	2.1 e	11:37a	-0.9	8:01a	-1.9	8:38a	-2.0
	5:03p	1:00p	1.9 f	6:06p	4.2	2:49p	4.7	3:28p	5.9
	10:37p	7:55p	1.5 e	11:13p	1.7	7:47p	2.2	8:34p	2.3
Mon. 5/29	3:53a	12:58a	1.5 f	4:37a	5.2	1:41a	6.2	2:34a	7.4
	11:03a	7:39a	2.0 e	12:28p	-0.8	8:54a	-1.6	9:29a	-1.7
	6:00p	1:53p	1.8 f	7:03p	4.2	3:48p	4.7	4:24p	5.9
	11:37p	8:52p	1.4 e			8:52p	2.3	9:35p	2.5
Tue. 5/30	4:50a	1:54a	1.3 f	12:17a	1.7	2:37a	5.7	3:30a	6.8
	11:56a	8:30a	1.8 e	5:35a	4.8	9:49a	-1.1	10:22a	-1.2
	6:56p	2:50p	1.6 f	1:21p	-0.6	4:48p	4.8	5:21p	5.8
		9:53p	1.4 e	8:01p	4.3	10:05p	2.4	10:42p	2.5
Wed. 5/31	12:44a	2:55a	1.1 f	1:26a	1.6	3:40a	5.1	4:31a	6.1
	5:53a	9:26a	1.5 e	6:43a	4.2	10:45a	-0.7	11:17a	-0.6
	12:52p	3:50p	1.5 f	2:15p	-0.4	5:47p	4.9	6:18p	5.9
	7:52p	10:58p	1.4 e	8:57p	4.4	11:26p	2.2	11:56p	2.4
Thu. 6/1	1:53a	4:02a	1.0 f	2:40a	1.4	4:52a	4.5	5:39a	5.5
	7:04a	10:29a	1.3 e	8:06a	3.8	11:42a	-0.1	12:14p	0.0
	1:51p	4:51p	1.4 f	3:09p	-0.2	6:41p	5.0	7:13p	6.0
	8:45p			9:50p	4.5				
Fri. 6/2	3:00a	12:02a	1.4 e	3:54a	1.0	12:45a	1.9	1:12a	2.1
	8:21a	5:14a	1.0 f	9:29a	3.5	6:12a	4.1	6:52a	5.0
	2:50p	11:38a	1.2 e	4:02p	0.1	12:37p	0.4	1:10p	0.6
	9:33p	5:50p	1.3 f	10:39p	4.7	7:29p	5.2	8:04p	6.2
Sat. 6/3	4:01a	1:03a	1.5 e	5:02a	0.6	1:55a	1.4	2:21a	1.6
	9:36a	6:27a	1.0 f	10:43a	3.4	7:31a	3.9	8:07a	4.8
	3:47p	12:49p	1.1 e	4:52p	0.3	1:29p	0.8	2:05p	1.1
	10:15p	6:42p	1.3 f	11:23p	4.8	8:12p	5.4	8:50p	6.4
Sun. 6/4	4:56a	1:56a	1.6 e	6:02a	0.3	2:52a	0.9	3:21a	1.1
	10:46a	7:33a	1.2 f	11:47a	3.4	8:43a	3.8	9:19a	4.7
	4:42p	1:54p	1.0 e	5:37p	0.6	2:17p	1.2	2:56p	1.5
	10:52p	7:27p	1.2 f			8:49p	5.5	9:30p	6.5
Mon. 6/5	5:45a	2:43a	1.7 e	12:02a	5.0	3:41a	0.4	4:10a	0.6
	11:48a	8:30a	1.3 f	6:55a	0.0	9:46a	3.8	10:23a	4.7
	5:32p	2:50p	1.0 e	12:44p	3.5	3:01p	1.6	3:42p	1.8
	11:26p	8:08p	1.2 f	6:19p	0.9	9:23p	5.6	10:07p	6.7
Tue. 6/6	6:29a	3:24a	1.7 e	12:36a	5.0	4:22a	0.0	4:53a	0.1
	12:44p	9:18a	1.5 f	7:42a	-0.2	10:40a	3.9	11:17a	4.8
	6:19p	3:40p	1.0 e	1:37p	3.6	3:41p	1.9	4:26p	2.1
	11:57p	8:48p	1.2 f	6:58p	1.3	9:55p	5.7	10:41p	6.8
Wed. 6/7	7:11a	3:59a	1.7 e	1:05a	5.1	5:00a	-0.3	5:32a	-0.3
	1:33p	10:01a	1.6 f	8:26a	-0.3	11:27a	3.9	12:05p	5.0
	7:02p	4:24p	1.0 e	2:27p	3.7	4:18p	2.1	5:06p	2.4
		9:26p	1.2 f	7:35p	1.6	10:26p	5.8	11:15p	6.9
Thu. 6/8	12:27a	4:28a	1.7 e	1:30a	5.1	5:35a	-0.5	6:08a	-0.5
	7:50a	10:40a	1.6 f	9:06a	-0.4	12:10p	4.0	12:47p	5.1
	2:19p	5:04p	1.0 e	3:15p	3.8	4:54p	2.3	5:45p	2.6
	7:43p	10:05p	1.2 f	8:12p	1.9	10:57p	5.8	11:48p	6.9
Fri. 6/9	12:58a	4:53a	1.7 e	1:52a	5.1	6:10a	-0.7	6:44a	-0.7
	8:27a	11:15a	1.6 f	9:44a	-0.4	12:51p	4.1	1:27p	5.2
	3:01p	5:42p	1.0 e	4:02p	3.9	5:30p	2.5	6:23p	2.7
	8:22p	10:44p	1.2 f	8:50p	2.1	11:28p	5.7		
Sat. 6/10	1:30a	5:19a	1.7 e	2:17a	5.2	6:44a	-0.7	12:21a	6.8
	8:59a	11:47a	1.5 f	10:19a	-0.3	1:31p	4.1	7:19a	-0.8
	3:40p	6:19p	1.0 e	4:46p	3.9	6:07p	2.6	2:06p	5.2
	9:02p	11:23p	1.1 f	9:30p	2.2			7:00p	2.9

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots		Time	Feet		Time	Feet	
Sun.	2:03a	5:50a	1.7e		2:49a	5.1		12:01a	5.7	
6/11	9:29a	12:19p	1.5f		10:51a	-0.3		7:19a	-0.7	
	4:17p	6:56p	1.0e		5:29p	3.9		2:12p	4.1	
	9:42p				10:12p	2.2		6:46p	2.7	
Mon.	2:38a	12:04a	1.1f		3:25a	5.1		12:36a	5.5	
6/12	9:57a	6:24a	1.6e		11:21a	-0.3		7:56a	-0.7	
	4:54p	12:52p	1.5f		6:10p	3.9		2:54p	4.2	
	10:25p	7:34p	1.1e		10:56p	2.1		7:29p	2.8	
Tue.	3:16a	12:47a	1.0f		4:07a	4.9		1:13a	5.3	
6/13	10:27a	7:02a	1.6e		11:51a	-0.3		8:34a	-0.5	
	5:30p	1:28p	1.5f		6:51p	3.9		3:37p	4.2	
	11:11p	8:15p	1.1e		11:46p	2.0		8:19p	2.9	
Wed.	3:59a	1:33a	0.9f		4:53a	4.6		1:54a	5.1	
6/14	11:01a	7:45a	1.5e		12:25p	-0.3		9:14a	-0.3	
	6:08p	2:08p	1.5f		7:32p	3.9		4:21p	4.3	
	8:59p		1.1e					9:17p	2.9	
Thu.	12:03a	2:24a	0.9f		12:41a	1.9		2:42a	4.8	
6/15	4:50a	8:33a	1.4e		5:45a	4.3		9:57a	-0.1	
	11:43a	2:54p	1.5f		1:03p	-0.2		5:05p	4.5	
	6:48p	9:46p	1.2e		8:14p	4.0		10:26p	2.7	
Fri.	1:00a	3:20a	0.9f		1:45a	1.7		3:41a	4.4	
6/16	5:53a	9:28a	1.3e		6:47a	3.9		10:42a	0.2	
	12:33p	3:44p	1.4f		1:48p	0.0		5:47p	4.7	
	7:29p	10:38p	1.2e		8:55p	4.1		11:39p	2.3	
Sat.	2:00a	4:22a	0.9f		2:56a	1.5		4:53a	4.1	
6/17	7:11a	10:30a	1.2e		8:04a	3.5		11:30a	0.5	
	1:32p	4:38p	1.4f		2:38p	0.2		6:28p	5.1	
	8:13p	11:32p	1.4e		9:37p	4.4				
Sun.	3:00a	5:26a	1.0f		4:09a	1.1		12:49a	1.8	
6/18	8:36a	11:38a	1.2e		9:34a	3.3		6:15a	3.8	
	2:37p	5:35p	1.4f		3:32p	0.5		12:20p	0.9	
	8:58p				10:17p	4.7		7:10p	5.5	
Mon.	3:59a	12:27a	1.5e		5:16a	0.6		1:52a	1.0	
6/19	9:57a	6:31a	1.2f		10:58a	3.4		7:37a	3.8	
	3:43p	12:48p	1.2e		4:26p	0.8		1:13p	1.2	
	9:46p	6:32p	1.4f		10:57p	5.0		7:52p	5.9	
Tue.	4:54a	1:22a	1.7e		6:17a	0.2		2:48a	0.3	
6/20	11:10a	7:34a	1.4f		12:09p	3.5		8:52a	3.9	
	4:47p	1:57p	1.2e		5:21p	1.1		2:06p	1.5	
	10:34p	7:28p	1.5f		11:38p	5.4		8:35p	6.3	
Wed.	5:48a	2:16a	1.9e		7:12a	-0.2		3:40a	-0.5	
6/21	12:15p	8:32a	1.7f		11:12p	3.7		9:58a	4.1	
	5:47p	3:02p	1.3e		6:16p	1.4		2:59p	1.7	
	11:23p	8:22p	1.6f					9:20p	6.7	
Thu.	6:40a	3:10a	2.1e		12:21a	5.7		4:30a	-1.2	
6/22	1:15p	9:27a	1.8f		8:05a	-0.5		10:58a	4.4	
	6:44p	4:04p	1.4e		2:11p	3.9		3:53p	1.9	
	9:15p	9:15p	1.6f		7:11p	1.6		10:07p	7.0	
Fri.	12:14a	4:03a	2.2e		1:05a	5.9		5:19a	-1.6	
6/23	7:31a	10:18a	2.0f		8:56a	-0.7		11:53a	4.6	
	2:11p	5:01p	1.5e		3:08p	4.1		4:46p	2.0	
	7:39p	10:07p	1.7f		8:08p	1.8		10:54p	7.1	
Sat.	1:04a	4:55a	2.3e		1:52a	6.0		6:07a	-1.9	
6/24	8:20a	11:07a	2.0f		9:45a	-0.8		12:46p	4.7	
	3:04p	5:56p	1.5e		4:02p	4.3		5:40p	2.1	
	8:33p	10:58p	1.7f		9:05p	1.8		11:43p	7.0	
Sun.	1:55a	5:45a	2.2e		2:41a	5.9		6:55a	-1.9	
6/25	9:07a	11:55a	2.0f		10:32a	-0.9		1:38p	4.9	
	3:56p	6:49p	1.6e		4:55p	4.4		6:35p	2.2	
	9:28p	11:49p	1.6f		10:04p	1.8				
Mon.	2:46a	6:32a	2.1e		3:32a	5.6		12:33a	6.7	
6/26	9:53a	12:42p	2.0f		11:19a	-0.8		7:43a	-1.7	
	4:45p	7:41p	1.6e		5:46p	4.5		2:29p	5.0	
	10:23p				11:03p	1.7		7:34p	2.2	
Tue.	3:37a	12:41a	1.5f		4:26a	5.3		1:25a	6.3	
6/27	10:39a	7:19a	2.0e		12:04p	-0.7		8:31a	-1.3	
	5:34p	1:30p	1.9f		6:36p	4.5		3:20p	5.0	
	11:21p	8:32p	1.6e					8:37p	2.2	
Wed.	4:32a	1:35a	1.3f		12:04a	1.6		2:20a	5.7	
6/28	11:25a	8:05a	1.8e		5:24a	4.8		9:20a	-0.8	
	6:21p	2:18p	1.7f		12:48p	-0.4		4:12p	5.1	
	9:26p	9:26p	1.5e		7:26p	4.6		9:46p	2.2	
Thu.	12:21a	2:33a	1.2f		1:08a	1.5		3:20a	5.1	
6/29	5:31a	8:55a	1.5e		6:29a	4.2		10:09a	-0.2	
	12:13p	3:08p	1.6f		1:33p	-0.2		5:04p	5.2	
	7:07p	10:22p	1.5e		8:17p	4.6		11:00p	2.1	
Fri.	1:25a	3:36a	1.0f		2:17a	1.3		4:28a	4.4	
6/30	6:39a	9:50a	1.2e		7:43a	3.8		10:59a	0.4	
	1:06p	3:59p	1.4f		2:20p	0.1		5:54p	5.3	
	7:53p	11:21p	1.4e		9:06p	4.7				
Sat.	2:29a	4:45a	1.0f		3:28a	1.0		12:16a	1.8	
7/1	7:54a	10:53a	1.0e		9:03a	3.4		5:46a	3.9	
	2:03p	4:53p	1.3f		3:09p	0.5		11:50a	1.0	
	8:37p				9:54p	4.8		6:42p	5.4	
Sun.	3:31a	12:20a	1.5e		4:37a	0.7		1:27a	1.4	
7/2	9:14a	5:59a	1.0f		10:19a	3.3		7:09a	3.7	
	3:03p	12:06p	0.9e		3:58p	0.9		12:42p	1.5	
	9:20p	5:47p	1.1f		10:39p	4.9		7:26p	5.5	
Mon.	4:28a	1:16a	1.5e		5:40a	0.4		2:27a	0.9	
7/3	10:29a	7:12a	1.1f		11:26a	3.4		8:28a	3.6	
	4:03p	1:20p	0.8e		4:48p	1.2		1:33p	1.9	
	10:01p	6:40p	1.1f		11:20p	5.0		8:08p	5.6	

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

	SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots	Time	Feet	Time	Feet	Time	Feet	Time	Feet
Tue. 7/4	5:19a	2:07a	1.6e	6:34a	0.1	3:18a	0.5	3:43a	0.7		
	11:35a	8:15a	1.3 f	12:27p	3.5	9:35a	3.7	10:06a	4.5		
	5:00p	2:25p	0.8e	5:36p	1.5	2:21p	2.2	3:04p	2.6		
	10:40p	7:30p	1.0 f	11:56p	5.1	8:46p	5.7	9:27p	6.7		
Wed. 7/5	6:06a	2:50a	1.6e	7:23a	-0.1	4:01a	0.1	4:28a	0.3		
	12:31p	9:07a	1.4 f	1:22p	3.7	10:30a	3.8	11:04a	4.7		
	5:52p	3:19p	0.9e	6:22p	1.8	3:07p	2.4	3:53p	2.8		
	11:20p	8:17p	1.0 f			9:22p	5.8	10:06p	6.8		
Thu. 7/6	6:49a	3:26a	1.6e	12:28a	5.2	4:39a	-0.2	5:09a	-0.1		
	1:20p	9:51a	1.5 f	8:06a	-0.2	11:16a	4.0	11:51a	4.9		
	6:39p	4:06p	0.9e	2:12p	3.9	3:49p	2.6	4:38p	2.9		
	11:58p	9:01p	1.1 f	7:06p	2.1	9:57p	5.9	10:45p	6.9		
Fri. 7/7	7:28a	3:57a	1.7e	12:57a	5.2	5:15a	-0.4	5:46a	-0.4		
	2:02p	10:28a	1.5 f	8:47a	-0.2	11:55a	4.1	12:31p	5.1		
	7:24p	4:47p	1.0e	2:59p	4.0	4:29p	2.6	5:20p	2.9		
		9:43p	1.1 f	7:50p	2.2	10:32p	6.0	11:22p	7.0		
Sat. 7/8	12:36a	4:26a	1.7e	1:25a	5.3	5:49a	-0.5	6:22a	-0.6		
	8:03a	10:59a	1.6 f	9:23a	-0.2	12:32p	4.2	1:08p	5.3		
	2:41p	5:25p	1.1e	3:43p	4.1	5:08p	2.7	6:00p	2.9		
	8:06p	10:24p	1.1 f	8:32p	2.3	11:07p	6.0	11:59p	7.0		
Sun. 7/9	1:12a	4:56a	1.7e	1:57a	5.3	6:23a	-0.6	6:57a	-0.7		
	8:33a	11:26a	1.6 f	9:57a	-0.2	1:07p	4.3	1:44p	5.4		
	3:17p	6:01p	1.1e	4:23p	4.2	5:47p	2.7	6:40p	2.9		
	8:46p	11:05p	1.2 f	9:15p	2.3	11:42p	6.0				
Mon. 7/10	1:48a	5:29a	1.7e	2:33a	5.3	6:56a	-0.6	12:35a	7.0		
	9:01a	11:54a	1.6 f	10:27a	-0.2	1:42p	4.4	7:32a	-0.7		
	3:51p	6:36p	1.2e	5:00p	4.2	6:27p	2.7	2:19p	5.5		
	9:26p	11:45p	1.2 f	9:57p	2.2			7:19p	2.9		
Tue. 7/11	2:24a	6:04a	1.7e	3:12a	5.2	12:18a	5.9	1:12a	6.8		
	9:29a	12:24p	1.7 f	10:55a	-0.2	7:30a	-0.5	8:06a	-0.6		
	4:23p	7:12p	1.3e	5:34p	4.2	2:18p	4.5	2:55p	5.6		
	10:05p			10:41p	2.0	7:11p	2.7	8:01p	2.8		
Wed. 7/12	3:03a	12:27a	1.1 f	3:55a	5.0	12:57a	5.7	1:50a	6.6		
	10:00a	6:43a	1.7e	11:23a	-0.2	8:05a	-0.4	8:42a	-0.5		
	4:54p	12:59p	1.7 f	6:06p	4.2	2:54p	4.7	3:32p	5.7		
	10:47p	7:48p	1.3e	11:28p	1.9	7:59p	2.6	8:46p	2.7		
Thu. 7/13	3:47a	1:11a	1.1 f	4:42a	4.8	1:39a	5.4	2:32a	6.3		
	10:35a	7:26a	1.7e	11:53a	-0.2	8:41a	-0.1	9:18a	-0.2		
	5:24p	1:37p	1.7 f	6:38p	4.3	3:32p	4.8	4:10p	5.8		
	11:32p	8:26p	1.3e			8:54p	2.5	9:37p	2.6		
Fri. 7/14	4:38a	1:59a	1.1 f	12:19a	1.7	2:28a	5.0	3:19a	5.9		
	11:16a	8:13a	1.5e	5:34a	4.4	9:20a	0.2	9:57a	0.2		
	5:57p	2:20p	1.6 f	12:29p	0.0	4:11p	5.0	4:50p	6.0		
	9:09p	1:49p	1.4e	7:12p	4.4	9:58p	2.3	10:35p	2.4		
Sat. 7/15	12:22a	2:52a	1.1 f	1:18a	1.5	3:26a	4.6	4:16a	5.5		
	5:40a	9:06a	1.4e	6:35a	4.0	10:01a	0.6	10:39a	0.6		
	12:04p	3:08p	1.5 f	1:10p	0.2	4:53p	5.2	5:32p	6.2		
	6:34p	9:56p	1.4e	7:52p	4.5	11:08p	2.0	11:40p	2.1		
Sun. 7/16	1:21a	3:52a	1.1 f	2:28a	1.3	4:38a	4.1	5:24a	5.0		
	6:57a	10:07a	1.2e	7:52a	3.6	10:47a	1.0	11:26a	1.2		
	1:01p	4:02p	1.4 f	1:58p	0.5	5:38p	5.5	6:18p	6.5		
	7:18p	10:50p	1.5e	8:37p	4.8						
Mon. 7/17	2:25a	4:57a	1.1 f	3:43a	1.0	12:20a	1.4	12:49a	1.5		
	8:24a	11:17a	1.1e	9:24a	3.4	6:02a	3.8	6:43a	4.7		
	2:06p	5:01p	1.4 f	2:52p	0.9	11:39a	1.5	12:21p	1.7		
	8:10p	11:50p	1.6e	9:26p	5.0	6:26p	5.9	7:08p	6.9		
Tue. 7/18	3:31a	6:07a	1.2 f	4:56a	0.6	1:28a	0.8	1:57a	0.9		
	9:49a	12:32p	1.0e	10:49a	3.4	7:29a	3.8	8:06a	4.6		
	3:17p	6:02p	1.3 f	3:52p	1.3	12:37p	1.8	1:23p	2.1		
	9:07p			10:17p	5.3	7:16p	6.2	8:00p	7.2		
Wed. 7/19	4:34a	12:53a	1.7e	6:02a	0.2	2:29a	0.1	3:00a	0.2		
	11:05a	7:17a	1.4 f	12:01p	3.6	8:47a	3.9	9:24a	4.8		
	4:26p	1:46p	1.1e	4:55p	1.6	1:38p	2.1	2:27p	2.4		
	10:06p	7:03p	1.4 f	11:08p	5.6	8:08p	6.6	8:54p	7.6		
Thu. 7/20	5:33a	1:56a	1.9e	7:00a	-0.1	3:25a	-0.5	3:57a	-0.5		
	12:10p	8:22a	1.6 f	1:03p	3.9	9:53a	4.2	10:33a	5.1		
	5:31p	2:54p	1.2e	5:58p	1.8	2:39p	2.2	3:30p	2.5		
	11:04p	8:02p	1.5 f	11:59p	5.8	9:00p	6.9	9:48p	7.9		
Fri. 7/21	6:27a	2:56a	2.0e	7:52a	-0.4	4:16a	-1.1	4:50a	-1.1		
	1:08p	9:19a	1.7 f	2:00p	4.1	10:49a	4.5	11:31a	5.5		
	6:31p	3:56p	1.3e	7:00p	1.9	3:38p	2.2	4:29p	2.4		
	11:59p	8:58p	1.6 f			9:51p	7.1	10:42p	8.1		
Sat. 7/22	7:18a	3:51a	2.1e	12:51a	6.0	5:04a	-1.4	5:40a	-1.5		
	2:00p	10:09a	1.9 f	8:42a	-0.5	11:40a	4.8	12:23p	5.8		
	7:27p	4:52p	1.5e	2:53p	4.4	4:34p	2.2	5:26p	2.3		
	9:52p	1:56a	1.6 f	7:59p	1.9	10:42p	7.1	11:34p	8.2		
Sun. 7/23	12:52a	4:42a	2.2e	1:42a	6.0	5:51a	-1.5	6:28a	-1.7		
	8:04a	10:54a	2.0 f	9:28a	-0.6	12:27p	5.0	1:11p	6.1		
	2:48p	5:44p	1.6e	3:42p	4.5	5:29p	2.1	6:19p	2.1		
	8:21p	10:43p	1.7 f	8:57p	1.8	11:32p	7.0				
Mon. 7/24	1:43a	5:30a	2.2e	2:34a	5.8	6:36a	-1.4	12:25a	8.1		
	8:48a	11:37a	2.0 f	10:12a	-0.6	1:12p	5.2	7:13a	-1.6		
	3:34p	6:33p	1.7e	4:29p	4.6	6:23p	2.0	1:56p	6.3		
	9:13p	11:33p	1.6 f	9:53p	1.7			7:12p	2.0		
Tue. 7/25	2:33a	6:14a	2.1e	3:26a	5.6	12:22a	6.7	1:15a	7.8		
	9:30a	12:18p	2.0 f	10:53a	-0.4	7:20a	-1.1	7:57a	-1.3		
	4:16p	7:19p	1.7e	5:14p	4.7	1:56p	5.3	2:40p	6.4		
	10:05p			10:49p	1.6	7:18p	2.0	8:05p	1.9		
Wed. 7/26	3:23a	12:23a	1.5 f	4:18a	5.2	1:12a	6.3	2:05a	7.3		
	10:11a	6:56a	1.9e	11:32a	-0.3	8:04a	-0.7	8:41a	-0.9		
	4:56p	12:59p	1.9 f	5:58p	4.8	2:41p	5.4	3:23p	6.5		
	10:57p	8:05p	1.6e	11:45p	1.5	8:16p	1.9	8:58p	1.9		

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

	SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots			Time	Feet	Time	Feet	Time	Feet
Thu. 7/27	4:15a	1:14a	1.4 f			5:13a	4.8	2:05a	5.7	2:56a	6.7
	10:52a	7:39a	1.7 e			12:10p	0.0	8:47a	-0.1	9:24a	-0.2
	5:35p	1:40p	1.7 f			6:42p	4.8	3:26p	5.4	4:06p	6.5
	11:51p	8:49p	1.6 e					9:17p	1.9	9:55p	1.8
Fri. 7/28	5:11a	2:07a	1.2 f			12:44a	1.3	3:01a	5.0	3:49a	6.0
	11:35a	8:23a	1.4 e			6:13a	4.3	9:30a	0.5	10:07a	0.5
	6:13p	2:24p	1.5 f			12:49p	0.3	4:12p	5.4	4:50p	6.4
		9:35p	1.5 e			7:26p	4.7	10:24p	1.8	10:55p	1.8
Sat. 7/29	12:49a	3:05a	1.1 f			1:46a	1.2	4:04a	4.4	4:47a	5.4
	6:14a	9:13a	1.1 e			7:22a	3.8	10:15a	1.1	10:51a	1.2
	12:22p	3:11p	1.3 f			1:29p	0.6	4:59p	5.4	5:35p	6.4
	6:51p	10:24p	1.4 e			8:11p	4.7	11:35p	1.7	11:59p	1.7
Sun. 7/30	1:50a	4:09a	1.0 f			2:54a	1.1	5:19a	4.0	5:53a	4.8
	7:27a	10:11a	0.9 e			8:38a	3.5	11:03a	1.7	11:39a	1.9
	1:15p	4:02p	1.1 f			2:15p	1.0	5:47p	5.4	6:22p	6.4
	7:33p	11:20p	1.3 e			8:58p	4.7				
Mon. 7/31	2:53a	5:24a	0.9 f			4:04a	0.9	12:46a	1.4	1:06a	1.6
	8:47a	11:22a	0.7 e			9:54a	3.4	6:45a	3.7	7:08a	4.5
	2:18p	4:58p	1.0 f			3:06p	1.4	11:56a	2.2	12:32p	2.5
	8:19p					9:46p	4.8	6:36p	5.4	7:10p	6.4
Tue. 8/1	3:54a	12:20a	1.3 e			5:09a	0.6	1:51a	1.1	2:10a	1.3
	10:05a	6:46a	1.0 f			11:04a	3.5	8:08a	3.7	8:29a	4.4
	3:25p	12:42p	0.6 e			4:03p	1.7	12:53p	2.5	1:31p	2.9
	9:09p	5:57p	0.9 f			10:31p	4.9	7:24p	5.5	8:00p	6.4
Wed. 8/2	4:49a	1:19a	1.4 e			6:07a	0.4	2:45a	0.7	3:08a	0.9
	11:13a	7:56a	1.2 f			12:06p	3.7	9:17a	3.8	9:43a	4.5
	4:29p	1:55p	0.7 e			5:00p	2.0	1:50p	2.7	2:31p	3.1
	10:00p	6:55p	0.9 f			11:14p	5.0	8:10p	5.6	8:48p	6.5
Thu. 8/3	5:39a	2:09a	1.4 e			6:56a	0.2	3:31a	0.4	3:57a	0.6
	12:07p	8:50a	1.3 f			1:00p	3.9	10:09a	4.0	10:41a	4.8
	5:27p	2:53p	0.8 e			5:55p	2.1	2:42p	2.8	3:26p	3.1
	10:50p	7:50p	1.0 f			11:54p	5.1	8:53p	5.8	9:35p	6.7
Fri. 8/4	6:21a	2:49a	1.5 e			7:40a	0.0	4:11a	0.2	4:40a	0.2
	12:53p	9:32a	1.4 f			1:48p	4.1	10:50a	4.2	11:25a	5.0
	6:17p	3:41p	1.0 e			6:45p	2.2	3:28p	2.7	4:15p	3.1
	11:35p	8:39p	1.0 f					9:34p	5.9	10:19p	6.8
Sat. 8/5	6:59a	3:24a	1.6 e			12:31a	5.2	4:47a	-0.1	5:19a	0.0
	1:33p	10:05a	1.5 f			8:19a	0.0	11:25a	4.3	12:02p	5.3
	7:03p	4:22p	1.1 e			2:32p	4.2	4:10p	2.7	5:00p	2.9
		9:23p	1.1 f			7:32p	2.2	10:12p	6.0	11:01p	7.0
Sun. 8/6	12:18a	3:57a	1.7 e			1:07a	5.3	5:22a	-0.2	5:55a	-0.3
	7:32a	10:31a	1.6 f			8:54a	0.0	11:57a	4.5	12:36p	5.5
	2:09p	5:00p	1.2 e			3:11p	4.3	4:50p	2.6	5:41p	2.7
	7:46p	10:05p	1.2 f			8:17p	2.2	10:50p	6.1	11:41p	7.1
Mon. 8/7	12:57a	4:31a	1.7 e			1:45a	5.3	5:54a	-0.3	6:30a	-0.4
	8:02a	10:56a	1.7 f			9:26a	0.0	12:28p	4.7	1:09p	5.7
	2:43p	5:35p	1.3 e			3:47p	4.4	5:29p	2.4	6:21p	2.5
	8:25p	10:45p	1.3 f			9:00p	2.0	11:27p	6.1		
Tue. 8/8	1:36a	5:07a	1.8 e			2:24a	5.3	6:27a	-0.3	12:20a	7.1
	8:32a	11:23a	1.7 f			9:55a	0.0	1:00p	4.8	7:04a	-0.5
	3:14p	6:08p	1.4 e			4:19p	4.4	6:10p	2.3	1:42p	5.8
	9:03p	11:25p	1.3 f			9:42p	1.9			7:01p	2.4
Wed. 8/9	2:15a	5:46a	1.8 e			3:06a	5.2	12:06a	6.0	12:59a	7.0
	9:03a	11:54a	1.8 f			10:23a	0.0	7:00a	-0.2	7:38a	-0.4
	3:43p	6:42p	1.5 e			4:47p	4.5	1:32p	5.0	2:16p	6.0
	9:40p					10:25p	1.7	6:53p	2.2	7:42p	2.2
Thu. 8/10	2:57a	12:06a	1.4 f			3:50a	5.0	12:47a	5.8	1:40a	6.8
	9:36a	6:27a	1.8 e			10:51a	0.1	7:33a	0.0	8:12a	-0.1
	4:10p	12:29p	1.8 f			5:13p	4.6	2:05p	5.1	2:49p	6.2
	10:18p	7:16p	1.5 e			11:10p	1.5	7:40p	2.0	8:27p	2.0
Fri. 8/11	3:43a	12:49a	1.4 f			4:37a	4.8	1:31a	5.5	2:23a	6.5
	10:14a	7:10a	1.7 e			11:22a	0.2	8:08a	0.3	8:48a	0.2
	4:37p	1:07p	1.8 f			5:41p	4.7	2:40p	5.3	3:25p	6.3
	11:01p	7:53p	1.6 e			11:59p	1.3	8:33p	1.8	9:16p	1.8
Sat. 8/12	4:36a	1:36a	1.4 f			5:31a	4.4	2:22a	5.1	3:13a	6.0
	10:56a	7:58a	1.6 e			11:58a	0.3	8:46a	0.8	9:26a	0.7
	5:09p	1:50p	1.7 f			6:15p	4.8	3:19p	5.4	4:04p	6.5
	11:50p	8:34p	1.6 e					9:33p	1.6	10:11p	1.6
Sun. 8/13	5:38a	2:28a	1.3 f			12:56a	1.1	3:23a	4.6	4:10a	5.6
	11:44a	8:52a	1.4 e			6:34a	4.0	9:27a	1.2	10:07a	1.2
	5:47p	2:39p	1.5 f			12:40p	0.6	4:03p	5.6	4:47p	6.7
	9:21p	6:57p	1.6 e			6:57p	4.9	10:41p	1.3	11:14p	1.3
Mon. 8/14	12:48a	3:27a	1.2 f			2:05a	1.0	4:36a	4.2	5:19a	5.1
	6:54a	9:53a	1.1 e			7:55a	3.7	10:15a	1.7	10:56a	1.8
	12:42p	3:34p	1.4 f			1:30p	1.0	4:53p	5.8	5:36p	6.8
	6:36p	10:17p	1.6 e			7:47p	5.0	11:54p	1.0		
Tue. 8/15	1:57a	4:34a	1.2 f			3:23a	0.8	6:02a	4.0	12:22a	1.0
	8:20a	11:05a	1.0 e			9:24a	3.5	11:13a	2.1	6:38a	4.8
	1:49p	4:35p	1.3 f			2:29p	1.4	5:49p	6.0	11:55a	2.4
	7:35p	11:23p	1.6 e			8:45p	5.2			6:32p	7.0
Wed. 8/16	3:09a	5:49a	1.2 f			4:39a	0.5	1:05a	0.5	1:33a	0.6
	9:45a	12:25p	0.9 e			10:44a	3.6	7:29a	4.0	8:01a	4.8
	3:04p	5:40p	1.2 f			3:37p	1.7	12:20p	2.4	1:04p	2.7
	8:43p					9:48p	5.3	6:50p	6.2	7:34p	7.2
Thu. 8/17	4:18a	12:34a	1.7 e			5:46a	0.2	2:10a	0.0	2:39a	0.1
	10:59a	7:08a	1.3 f			11:52a	3.9	8:44a	4.2	9:19a	5.0
	4:17p	1:41p	1.0 e			4:49p	1.8	1:30p	2.5	2:16p	2.8
	9:51p	6:46p	1.3 f			10:52p	5.5	7:50p	6.5	8:36p	7.4
Fri. 8/18	5:19a	1:44a	1.8 e			6:43a	-0.1	3:07a	-0.4	3:39a	-0.4
	12:01p	8:17a	1.5 f			12:50p	4.1	9:43a	4.5	10:23a	5.4
	5:22p	2:48p	1.2 e			5:56p	1.8	2:36p	2.4	3:24p	2.7
	10:55p	7:49p	1.4 f			11:51p	5.6	8:48p	6.7	9:36p	7.6

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

	SLACK			CURRENT			TIDE		TIDE		TIDE	
	Time	Time	Knots	Time	Feet	Time	Time	Feet	Time	Feet	Time	Feet
Sat. 8/19	6:12a	2:46a	1.9e	7:35a	-0.3	3:59a	4:33a	-0.7	4:33a	-0.8		
	12:53p	9:12a	1.7 f	1:41p	4.4	10:32a	11:16a	4.8	11:16a	5.8		
	6:22p	3:47p	1.4e	6:58p	1.7	3:36p	4:24p	2.2	4:24p	2.4		
	11:52p	8:46p	1.5 f			9:43p	10:33p	6.8	10:33p	7.8		
Sun. 8/20	7:00a	3:40a	2.0e	12:47a	5.7	4:46a	5:22a	-0.9	5:22a	-1.0		
	1:40p	9:56a	1.8 f	8:21a	-0.3	11:16a	12:02p	5.1	12:02p	6.1		
	7:16p	4:39p	1.6e	2:29p	4.6	4:30p	5:18p	2.0	5:18p	2.0		
		9:40p	1.6 f	7:55p	1.6	10:35p	11:26p	6.8	11:26p	7.8		
Mon. 8/21	12:45a	4:29a	2.0e	1:39a	5.6	5:30a	6:07a	-0.8	6:07a	-1.0		
	7:44a	10:35a	1.9 f	9:04a	-0.3	11:57a	12:44p	5.3	12:44p	6.4		
	2:22p	5:27p	1.7e	3:13p	4.7	5:22p	6:10p	1.7	6:10p	1.7		
	8:07p	10:29p	1.6 f	8:50p	1.5	11:25p		6.7				
Tue. 8/22	1:35a	5:13a	2.0e	2:30a	5.5	6:12a	12:16a	-0.6	12:16a	7.7		
	8:25a	11:11a	1.9 f	9:44a	-0.2	12:37p	6:50a	5.4	6:50a	-0.9		
	3:01p	6:11p	1.8e	3:54p	4.8	6:12p	1:23p	1.5	1:23p	6.6		
	8:56p	11:17p	1.6 f	9:42p	1.3		6:58p		6:58p	1.4		
Wed. 8/23	2:24a	5:54a	1.9e	3:21a	5.3	12:13a	1:04a	6.4	1:04a	7.4		
	9:04a	11:47a	1.9 f	10:21a	0.0	6:52a	7:30a	-0.3	7:30a	-0.5		
	3:37p	6:52p	1.7e	4:34p	4.8	1:15p	2:02p	5.5	2:02p	6.7		
	9:43p			10:33p	1.2	7:02p	7:46p	1.4	7:46p	1.3		
Thu. 8/24	3:12a	12:04a	1.6 f	4:11a	4.9	1:02a	1:52a	5.9	1:52a	7.0		
	9:42a	6:34a	1.7e	10:55a	0.2	7:31a	8:10a	0.2	8:10a	0.0		
	4:09p	12:24p	1.8 f	5:11p	4.8	1:54p	2:39p	5.5	2:39p	6.7		
	10:29p	7:30p	1.7e	11:23p	1.1	7:52p	8:34p	1.4	8:34p	1.2		
Fri. 8/25	4:01a	12:51a	1.5 f	5:03a	4.6	1:51a	2:39a	5.4	2:39a	6.4		
	10:20a	7:13a	1.5e	11:29a	0.5	8:10a	8:49a	0.7	8:49a	0.6		
	4:40p	1:02p	1.6 f	5:46p	4.8	2:33p	3:17p	5.5	3:17p	6.6		
	11:16p	8:06p	1.6e			8:45p	9:23p	1.4	9:23p	1.2		
Sat. 8/26	4:54a	1:40a	1.3 f	12:16a	1.0	2:45a	3:29a	4.9	3:29a	5.9		
	10:59a	7:55a	1.3e	5:59a	4.2	8:49a	9:28a	1.3	9:28a	1.3		
	5:11p	1:43p	1.4 f	12:04p	0.8	3:13p	3:56p	5.4	3:56p	6.5		
	8:41p	1:4e		6:21p	4.7	9:42p	10:15p	1.4	10:15p	1.3		
Sun. 8/27	12:07a	2:32a	1.2 f	1:12a	1.0	3:45a	4:24a	4.4	4:24a	5.3		
	5:54a	8:42a	1.0e	7:04a	3.8	9:31a	10:09a	1.9	10:09a	2.0		
	11:42a	2:28p	1.2 f	12:42p	1.1	3:56p	4:37p	5.3	4:37p	6.3		
	5:44p	9:19p	1.3e	6:58p	4.6	10:45p	11:12p	1.4	11:12p	1.4		
Mon. 8/28	1:04a	3:32a	1.0 f	2:15a	0.9	4:57a	5:26a	4.0	5:26a	4.9		
	7:02a	9:36a	0.8e	8:17a	3.6	10:18a	10:55a	2.3	10:55a	2.6		
	12:33p	3:18p	1.0 f	1:27p	1.5	4:45p	5:22p	5.2	5:22p	6.2		
	6:26p	10:05p	1.2e	7:42p	4.6	11:54p		1.3				
Tue. 8/29	2:07a	4:42a	0.9 f	3:22a	0.9	6:20a	12:14a	3.8	12:14a	1.4		
	8:18a	10:42a	0.6e	9:31a	3.5	11:16a	6:37a	2.7	6:37a	4.6		
	1:37p	4:15p	0.9 f	2:22p	1.8	5:39p	11:50a	5.1	11:50a	3.0		
	7:18p	11:02p	1.2e	8:33p	4.5		6:14p		6:14p	6.1		
Wed. 8/30	3:11a	6:08a	0.9 f	4:29a	0.7	1:01a	1:19a	1.2	1:19a	1.3		
	9:33a	12:02p	0.6e	10:39a	3.6	7:43a	7:57a	3.9	7:57a	4.6		
	2:51p	5:18p	0.8 f	3:27p	2.0	12:22p	12:56p	2.9	12:56p	3.3		
	8:20p			9:32p	4.5	6:38p	7:12p	5.2	7:12p	6.0		
Thu. 8/31	4:10a	12:08a	1.2e	5:29a	0.5	2:01a	2:22a	0.9	2:22a	1.1		
	10:38a	7:25a	1.0 f	11:39a	3.8	8:47a	9:10a	4.0	9:10a	4.7		
	4:02p	1:19p	0.7e	4:33p	2.1	1:28p	2:04p	2.9	2:04p	3.4		
	9:23p	6:22p	0.8 f	10:30p	4.6	7:34p	8:10p	5.3	8:10p	6.1		
Fri. 9/1	5:00a	1:10a	1.3e	6:20a	0.3	2:51a	3:17a	0.7	3:17a	0.9		
	11:30a	8:18a	1.2 f	12:30p	4.0	9:34a	10:05a	4.2	10:05a	5.0		
	5:02p	2:19p	0.9e	5:33p	2.1	2:24p	3:05p	2.8	3:05p	3.2		
	10:21p	7:23p	0.9 f	11:22p	4.8	8:24p	9:05p	5.5	9:05p	6.3		
Sat. 9/2	5:43a	2:01a	1.4e	7:03a	0.2	3:34a	4:03a	0.4	4:03a	0.6		
	12:14p	8:56a	1.3 f	1:15p	4.2	10:11a	10:47a	4.4	10:47a	5.2		
	5:54p	3:07p	1.1e	6:26p	2.0	3:11p	3:56p	2.6	3:56p	3.0		
	11:12p	8:15p	1.0 f			9:10p	9:54p	5.7	9:54p	6.5		
Sun. 9/3	6:20a	2:43a	1.5e	12:08a	4.9	4:11a	4:44a	0.3	4:44a	0.3		
	12:52p	9:25a	1.5 f	7:41a	0.1	10:42a	11:22a	4.6	11:22a	5.5		
	6:40p	3:48p	1.2e	1:54p	4.3	3:53p	4:40p	2.4	4:40p	2.6		
	11:58p	9:01p	1.2 f	7:14p	1.8	9:52p	10:40p	5.8	10:40p	6.7		
Mon. 9/4	6:54a	3:24a	1.6e	12:52a	5.0	4:46a	5:21a	0.1	5:21a	0.1		
	1:27p	9:50a	1.6 f	8:15a	0.1	11:12a	11:55a	4.8	11:55a	5.8		
	7:20p	4:25p	1.4e	2:29p	4.4	4:33p	5:21p	2.1	5:21p	2.2		
	9:44p	1:3f		7:59p	1.6	10:33p	11:23p	5.9	11:23p	6.9		
Tue. 9/5	12:42a	4:04a	1.7e	1:34a	5.0	5:19a	5:56a	0.1	5:56a	0.0		
	7:27a	10:18a	1.7 f	8:47a	0.2	11:41a	12:27p	5.0	12:27p	6.1		
	1:59p	5:00p	1.5e	3:00p	4.5	5:13p	6:01p	1.8	6:01p	1.8		
	7:58p	10:24p	1.4 f	8:42p	1.4	11:13p		6.0				
Wed. 9/6	1:24a	4:45a	1.8e	2:17a	5.0	5:51a	12:05a	0.1	12:05a	6.9		
	8:01a	10:49a	1.8 f	9:16a	0.2	12:11p	6:31a	5.2	6:31a	0.0		
	2:28p	5:34p	1.6e	3:27p	4.6	5:53p	12:59p	1.5	12:59p	6.3		
	8:35p	11:04p	1.6 f	9:25p	1.2	11:55p	6:42p	5.9	6:42p	1.4		
Thu. 9/7	2:08a	5:28a	1.8e	3:01a	4.9	6:25a	12:47a	0.3	12:47a	6.9		
	8:37a	11:23a	1.9 f	9:45a	0.3	12:42p	7:05a	5.4	7:05a	0.1		
	2:56p	6:08p	1.7e	3:52p	4.7	6:37p	1:31p	1.2	1:31p	6.6		
	9:11p	11:46p	1.6 f	10:08p	1.0		7:24p		7:24p	1.1		
Fri. 9/8	2:54a	6:12a	1.8e	3:48a	4.8	12:40a	1:31a	5.7	1:31a	6.7		
	9:15a	12:00p	1.8 f	10:17a	0.4	6:59a	7:41a	0.6	7:41a	0.4		
	3:23p	6:44p	1.8e	4:19p	4.8	1:15p	2:04p	5.6	2:04p	6.7		
	9:51p			10:54p	0.8	7:23p	8:08p	1.0	8:08p	0.8		
Sat. 9/9	3:44a	12:29a	1.7 f	4:39a	4.5	1:29a	2:19a	5.4	2:19a	6.4		
	9:56a	6:59a	1.7e	10:52a	0.6	7:35a	8:18a	1.0	8:18a	0.9		
	3:53p	12:41p	1.8 f	4:50p	5.0	1:51p	2:40p	5.7	2:40p	6.9		
	10:34p	7:22p	1.8e	11:43p	0.7	8:15p	8:57p	0.8	8:57p	0.6		
Sun. 9/10	4:39a	1:16a	1.6 f	5:36a	4.2	2:24a	3:11a	5.0	3:11a	6.0		
	10:41a	7:48a	1.5e	11:32a	0.8	8:15a	8:58a	1.4	8:58a	1.4		
	4:29p	1:26p	1.6 f	5:28p	5.1	2:32p	3:20p	5.8	3:20p	7.0		
	11:25p	8:05p	1.7e			9:13p	9:50p	0.6	9:50p	0.5		

**SAN MATEO
CURRENTS**

**PORT
CHICAGO**

**ARENA
COVE**

**HUMBOLDT
BAY**

	SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots			Time	Feet	Time	Feet	Time	Feet
Mon. 9/11	5:43a	2:08a	1.5 f			12:41a	0.6	3:28a	4.6	4:11a	5.6
	11:32a	8:44a	1.3e			6:44a	3.9	9:00a	1.9	9:42a	2.0
	5:13p	2:16p	1.5 f			12:18p	1.1	3:20p	5.8	4:06p	7.0
Tue. 9/12		8:54p	1.7e			6:14p	5.1	10:18p	0.5	10:51p	0.4
	12:25a	3:08a	1.3 f			1:48a	0.5	4:43a	4.3	5:20a	5.2
	6:57a	9:47a	1.1e			8:04a	3.7	9:55a	2.3	10:36a	2.5
Wed. 9/13	12:32p	3:13p	1.3 f			1:14p	1.4	4:15p	5.8	5:00p	6.9
	6:08p	9:54p	1.6e			7:09p	5.0	11:30p	0.4	11:58p	0.4
	1:35a	4:17a	1.2 f			3:04a	0.4	6:07a	4.2	6:38a	5.1
Thu. 9/14	8:19a	11:01a	1.0e			9:24a	3.7	11:03a	2.6	11:43a	2.9
	1:44p	4:17p	1.2 f			2:22p	1.6	5:20p	5.8	6:04p	6.8
	7:15p	11:04p	1.5e			8:16p	4.9				
Fri. 9/15	2:49a	5:36a	1.2 f			4:19a	0.2	12:42a	0.2	1:09a	0.3
	9:38a	12:21p	1.0e			10:35a	3.8	7:27a	4.3	7:58a	5.1
	3:00p	5:25p	1.1 f			3:38p	1.7	12:21p	2.7	1:01p	3.0
Sat. 9/16	8:31p					9:33p	4.9	6:31p	5.9	7:15p	6.8
	3:59a	12:20a	1.6e			5:24a	0.0	1:48a	0.0	2:17a	0.1
	10:45a	7:01a	1.3 f			11:36a	4.1	8:31a	4.6	9:08a	5.4
Sun. 9/17	4:12p	1:35p	1.1e			4:52p	1.6	1:37p	2.5	2:17p	2.9
	9:44p	6:34p	1.2 f			10:46p	5.0	7:39p	6.0	8:24p	6.9
	4:59a	1:33a	1.7e			6:20a	-0.1	2:46a	-0.2	3:18a	-0.1
Mon. 9/18	11:41a	8:08a	1.5 f			12:29p	4.3	9:23a	4.9	10:05a	5.8
	5:16p	2:38p	1.4e			5:58p	1.4	2:42p	2.2	3:24p	2.4
	10:50p	7:39p	1.3 f			11:49p	5.1	8:42p	6.1	9:29p	7.0
Tue. 9/19	5:51a	2:34a	1.8e			7:09a	-0.2	3:36a	-0.3	4:12a	-0.3
	12:28p	8:55a	1.6 f			1:16p	4.5	10:07a	5.1	10:52a	6.1
	6:12p	3:32p	1.6e			6:57p	1.2	3:38p	1.8	4:22p	1.9
Wed. 9/20	11:47p	8:37p	1.5 f			9:29p	1.6 f	9:39p	6.2	10:27p	7.1
	6:37a	3:27a	1.8e			12:46a	5.1	4:22a	-0.2	4:59a	-0.3
	1:10p	9:33a	1.7 f			7:53a	-0.2	10:46a	5.4	11:33a	6.4
Thu. 9/21	7:04p	4:21p	1.7e			1:59p	4.7	4:29p	1.4	5:13p	1.4
	9:29p	6:16p	1.6 f			7:51p	1.0	10:31p	6.1	11:20p	7.1
	12:40a	4:13a	1.8e			1:38a	5.0	5:03a	-0.1	5:42a	-0.2
Fri. 9/22	7:20a	10:07a	1.8 f			8:32a	0.0	11:22a	5.6	12:10p	6.7
	1:47p	5:05p	1.8e			2:38p	4.8	5:15p	1.1	6:00p	1.0
	7:51p	10:16p	1.6 f			8:41p	0.8	11:20p	6.0		
Sat. 9/23	1:29a	4:55a	1.8e			2:27a	4.9	5:42a	0.2	12:09a	7.0
	8:00a	10:40a	1.8 f			9:09a	0.2	11:57a	5.7	6:22a	0.1
	2:20p	5:45p	1.8e			3:14p	4.8	6:00p	0.8	12:46p	6.8
Sun. 9/24	8:36p	11:01p	1.7 f			9:30p	0.7			6:44p	0.7
	2:17a	5:35a	1.7e			3:16a	4.7	12:07a	5.7	12:55a	6.8
	8:38a	11:14a	1.7 f			9:43a	0.4	6:19a	0.6	7:00a	0.5
Mon. 9/25	2:49p	6:20p	1.8e			3:47p	4.8	12:31p	5.7	1:20p	6.9
	9:18p	11:45p	1.6 f			10:16p	0.6	6:44p	0.7	7:27p	0.5
	3:04a	6:14a	1.5e			4:04a	4.5	12:54a	5.4	1:41a	6.5
Tue. 9/26	9:15a	11:50a	1.6 f			10:15a	0.7	6:55a	1.1	7:36a	1.0
	3:16p	6:51p	1.7e			4:16p	4.8	1:04p	5.7	1:53p	6.8
	10:00p					11:02p	0.6	7:28p	0.6	8:09p	0.5
Wed. 9/27	3:53a	12:29a	1.5 f			4:55a	4.2	1:42a	5.1	2:26a	6.1
	9:51a	6:52a	1.3e			10:47a	1.0	7:31a	1.6	8:13a	1.6
	3:42p	12:27p	1.5 f			4:43p	4.7	1:38p	5.5	2:26p	6.7
Thu. 9/28	10:42p	7:19p	1.6e			11:48p	0.6	8:13p	0.7	8:52p	0.5
	4:43a	1:14a	1.4 f			5:50a	4.0	2:33a	4.7	3:13a	5.7
	10:29a	7:32a	1.1e			11:21a	1.3	8:08a	2.0	8:49a	2.1
Fri. 9/29	4:10p	1:06p	1.3 f			5:10p	4.7	2:13p	5.4	3:00p	6.5
	11:26p	7:48p	1.5e			6:02p	0.6	9:02p	0.8	9:37p	0.7
	5:37a	2:01a	1.2 f			12:37a	0.6	3:30a	4.3	4:04a	5.3
Sat. 9/30	11:10a	8:17a	0.9e			6:51a	3.7	8:49a	2.5	9:29a	2.7
	4:44p	1:50p	1.1f			12:01p	1.5	2:52p	5.2	3:38p	6.3
	8:22p	1:42p	1.4e			5:42p	4.6	9:56p	0.9	10:26p	0.9
Mon. 10/1	12:16a	2:55a	1.1 f			1:31a	0.6	4:37a	4.1	5:02a	5.0
	6:38a	9:08a	0.8e			7:57a	3.6	9:37a	2.8	10:14a	3.1
	12:00p	2:40p	0.9 f			12:48p	1.8	3:39p	5.0	4:21p	6.0
Tue. 10/2	5:27p	9:06p	1.2e			6:23p	4.4	10:58p	1.0	11:22p	1.1
	1:13a	3:56a	0.9 f			2:33a	0.6	5:54a	4.0	6:09a	4.8
	7:45a	10:09a	0.7e			9:06a	3.5	10:40a	3.0	11:11a	3.5
Wed. 10/3	1:05p	3:38p	0.8 f			1:47p	2.0	4:36p	4.8	5:15p	5.8
	6:22p	9:59p	1.1e			7:15p	4.2				
	2:14a	5:08a	0.9 f			3:38a	0.6	12:03a	1.0	12:23a	1.2
Thu. 10/4	8:52a	11:22a	0.7e			10:10a	3.6	7:09a	4.1	7:21a	4.8
	2:22p	4:42p	0.7 f			2:57p	2.1	11:57a	3.1	12:24p	3.6
	7:30p	11:02p	1.1e			8:24p	4.1	5:43p	4.7	6:19p	5.6
Fri. 10/5	3:13a	6:23a	1.0 f			4:38a	0.4	1:06a	0.9	1:27a	1.2
	9:52a	12:35p	0.8e			11:06a	3.8	8:06a	4.2	8:27a	4.9
	3:35p	5:49p	0.7 f			4:08p	2.0	1:08p	3.0	1:39p	3.5
Sat. 10/6	8:43p					9:41p	4.1	6:50p	4.8	7:27p	5.6
	4:05a	12:07a	1.1e			5:30a	0.3	1:59a	0.8	2:26a	1.0
	10:42a	7:18a	1.1 f			11:53a	4.0	8:49a	4.4	9:19a	5.2
Sun. 10/7	4:36p	1:36p	1.0e			5:11p	1.8	2:06p	2.7	2:42p	3.2
	9:49p	6:52p	0.8 f			10:48p	4.2	7:50p	5.0	8:30p	5.8
	4:50a	1:07a	1.2e			6:14a	0.2	2:45a	0.7	3:16a	0.8
Mon. 10/8	11:25a	7:57a	1.3 f			12:34p	4.1	9:24a	4.7	10:00a	5.5
	5:27p	2:25p	1.2e			6:06p	1.5	2:53p	2.3	3:34p	2.7
	10:46p	7:47p	1.0 f			11:44p	4.3	8:42p	5.2	9:26p	6.0
Tue. 10/9	5:31a	2:00a	1.4e			6:52a	0.2	3:25a	0.5	4:00a	0.6
	12:03p	8:30a	1.4 f			1:09p	4.3	9:54a	4.9	10:36a	5.9
	6:10p	3:06p	1.4e			6:54p	1.2	3:35p	1.9	4:19p	2.1
Wed. 10/10	11:37p	8:35p	1.2 f			7:40p	1.0	9:30p	5.4	10:16p	6.2
	6:11a	2:49a	1.5e			12:34a	4.5	4:01a	0.5	4:40a	0.5
	12:37p	9:03a	1.6 f			7:27a	0.2	10:23a	5.2	11:09a	6.2
Thu. 10/11	6:50p	3:44p	1.6e			1:40p	4.4	4:15p	1.4	5:01p	1.5
	9:19p	1:44p	1.4 f			7:40p	1.0	10:16p	5.5	11:04p	6.5

**SAN MATEO
CURRENTS**
**PORT
CHICAGO**
**ARENA
COVE**
**HUMBOLDT
BAY**

SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Time	Knots	Time	Feet	Time	Feet	Time	Feet
Wed. 10/4	12:25a	3:36a	1.7e		1:22a	4.5	4:36a	0.5	5:17a	0.5
	6:50a	9:38a	1.7f		7:59a	0.3	10:52a	5.5	11:41a	6.6
	1:09p	4:21p	1.7e		2:07p	4.6	4:56p	1.0	5:42p	0.9
	7:28p	10:01p	1.6f		8:24p	0.7	11:01p	5.6	11:50p	6.6
Thu. 10/5	1:13a	4:23a	1.8e		2:09a	4.6	5:11a	0.7	5:54a	0.6
	7:31a	10:14a	1.8f		8:32a	0.4	11:23a	5.7	12:14p	6.9
	1:38p	4:57p	1.8e		2:32p	4.8	5:37p	0.5	6:23p	0.4
	8:06p	10:43p	1.8f		9:08p	0.4	11:48p	5.5		
Fri. 10/6	2:02a	5:11a	1.8e		2:58a	4.5	5:47a	0.9	12:37a	6.6
	8:13a	10:53a	1.8f		9:06a	0.6	11:56a	6.0	6:31a	0.8
	2:08p	5:35p	1.9e		3:00p	5.0	6:21p	0.1	12:47p	7.2
	8:45p	11:27p	1.9f		9:53p	0.2			7:06p	-0.1
Sat. 10/7	2:53a	6:00a	1.7e		3:49a	4.4	12:37a	5.4	1:25a	6.5
	8:56a	11:34a	1.8f		9:43a	0.8	6:24a	1.2	7:10a	1.2
	2:40p	6:14p	2.0e		3:32p	5.1	12:31p	6.1	1:23p	7.4
	9:28p				10:41p	0.0	7:09p	-0.2	7:51p	-0.4
Sun. 10/8	3:46a	12:12a	1.9f		4:44a	4.2	1:30a	5.2	2:16a	6.3
	9:41a	6:50a	1.6e		10:24a	1.0	7:05a	1.6	7:50a	1.6
	3:16p	12:17p	1.7f		4:09p	5.2	1:10p	6.2	2:01p	7.5
	10:14p	6:56p	2.0e		11:32p	-0.1	8:00p	-0.3	8:40p	-0.5
Mon. 10/9	4:44a	1:00a	1.8f		5:45a	4.0	2:28a	4.9	3:11a	6.0
	10:30a	7:42a	1.5e		11:11a	1.2	7:49a	2.0	8:34a	2.1
	3:59p	1:05p	1.6f		4:52p	5.2	1:54p	6.2	2:44p	7.4
	11:07p	7:43p	1.9e				8:56p	-0.3	9:33p	-0.5
Tue. 10/10	5:48a	1:53a	1.6f		12:30a	-0.1	3:34a	4.7	4:12a	5.7
	11:24a	8:39a	1.3e		6:53a	3.9	8:42a	2.4	9:25a	2.6
	4:49p	1:58p	1.4f		12:04p	1.4	2:46p	6.0	3:34p	7.2
		8:35p	1.8e		5:43p	5.0	9:58p	-0.3	10:31p	-0.3
Wed. 10/11	12:07a	2:54a	1.5f		1:34a	-0.1	4:47a	4.5	5:20a	5.5
	6:58a	9:44a	1.1e		8:05a	3.8	9:46a	2.7	10:26a	3.0
	12:28p	2:57p	1.2f		1:08p	1.6	3:46p	5.7	4:33p	6.8
	5:50p	9:36p	1.6e		6:43p	4.8	11:06p	-0.1	11:35p	-0.1
Thu. 10/12	1:15a	4:02a	1.3f		2:44a	-0.1	6:03a	4.5	6:33a	5.5
	8:10a	10:57a	1.1e		9:15a	3.8	11:05a	2.8	11:40a	3.2
	1:41p	4:03p	1.1f		2:22p	1.6	4:58p	5.5	5:43p	6.5
	7:03p	10:47p	1.5e		7:59p	4.5				
Fri. 10/13	2:25a	5:21a	1.3f		3:53a	-0.1	12:15a	-0.1	12:44a	0.0
	9:19a	12:13p	1.2e		10:18a	4.0	7:12a	4.7	7:45a	5.6
	2:56p	5:13p	1.1f		3:40p	1.5	12:29p	2.6	1:03p	3.0
	8:21p				9:25p	4.4	6:16p	5.4	6:59p	6.3
Sat. 10/14	3:32a	12:03a	1.5e		4:55a	-0.2	1:19a	0.0	1:50a	0.2
	10:20a	6:41a	1.4f		11:14a	4.2	8:08a	5.0	8:47a	5.9
	4:06p	1:22p	1.3e		4:53p	1.2	1:44p	2.3	2:19p	2.6
	9:37p	6:25p	1.1f		10:41p	4.3	7:31p	5.3	8:14p	6.2
Sun. 10/15	4:31a	1:15a	1.5e		5:49a	-0.2	2:17a	0.1	2:51a	0.2
	11:11a	7:40a	1.5f		12:03p	4.5	8:55a	5.3	9:38a	6.2
	5:07p	2:21p	1.5e		5:57p	0.9	2:46p	1.8	3:24p	2.0
	10:43p	7:31p	1.3f		11:46p	4.4	8:37p	5.3	9:22p	6.3
Mon. 10/16	5:23a	2:16a	1.5e		6:36a	-0.1	3:07a	0.3	3:43a	0.3
	11:55a	8:24a	1.5f		12:46p	4.7	9:36a	5.5	10:22a	6.6
	6:00p	3:12p	1.7e		6:53p	0.5	3:38p	1.2	4:18p	1.4
	11:43p	8:29p	1.4f				9:36p	5.4	10:21p	6.3
Tue. 10/17	6:10a	3:09a	1.6e		12:42a	4.4	3:51a	0.5	4:30a	0.5
	12:32p	9:01a	1.6f		7:17a	0.0	10:12a	5.7	11:00a	6.8
	6:49p	3:58p	1.8e		1:25p	4.8	4:25p	0.8	5:05p	0.8
	9:19p	1:5f			7:44p	0.3	10:29p	5.3	11:15p	6.3
Wed. 10/18	12:36a	3:56a	1.5e		1:33a	4.4	4:32a	0.8	5:12a	0.8
	6:53a	9:34a	1.6f		7:55a	0.3	10:45a	5.9	11:34a	7.0
	1:05p	4:39p	1.9e		2:01p	4.9	5:08p	0.4	5:48p	0.4
	7:33p	10:04p	1.6f		8:32p	0.2	11:18p	5.2		
Thu. 10/19	1:26a	4:39a	1.5e		2:23a	4.3	5:09a	1.1	12:03a	6.3
	7:34a	10:08a	1.5f		8:30a	0.6	11:17a	5.9	5:50a	1.1
	1:34p	5:16p	1.8e		2:32p	4.9	5:48p	0.2	12:07p	7.1
	8:15p	10:47p	1.7f		9:17p	0.1			6:29p	0.1
Fri. 10/20	2:14a	5:20a	1.4e		3:11a	4.2	12:04a	5.1	12:49a	6.2
	8:13a	10:42a	1.5f		9:04a	0.9	5:44a	1.5	6:27a	1.5
	2:00p	5:46p	1.8e		2:59p	4.8	11:47a	5.9	12:38p	7.1
	8:55p	11:28p	1.6f		10:01p	0.0	6:27p	0.0	7:07p	-0.1
Sat. 10/21	3:01a	5:59a	1.3e		4:00a	4.1	12:50a	4.9	1:32a	6.0
	8:50a	11:18a	1.4f		9:36a	1.2	6:18a	1.9	7:03a	2.0
	2:24p	6:12p	1.7e		3:22p	4.8	12:18p	5.8	1:09p	7.0
	9:33p				10:42p	0.1	7:06p	0.0	7:46p	-0.1
Sun. 10/22	3:48a	12:09a	1.6f		4:50a	3.9	1:36a	4.7	2:16a	5.8
	9:27a	6:37a	1.1e		10:09a	1.4	6:53a	2.3	7:38a	2.4
	2:51p	11:56a	1.3f		3:46p	4.8	12:48p	5.7	1:40p	6.9
	10:11p	6:37p	1.6e		11:23p	0.1	7:46p	0.1	8:24p	0.0
Mon. 10/23	4:35a	12:50a	1.4f		5:42a	3.8	2:25a	4.5	3:01a	5.6
	10:04a	7:16a	1.0e		10:46a	1.7	7:30a	2.6	8:15a	2.8
	3:21p	12:36p	1.2f		4:14p	4.7	1:21p	5.4	2:12p	6.6
	10:50p	7:06p	1.5e				8:29p	0.2	9:04p	0.1
Tue. 10/24	5:23a	1:34a	1.3f		12:05a	0.1	3:18a	4.4	3:48a	5.4
	10:46a	7:58a	0.9e		6:38a	3.7	8:11a	2.9	8:54a	3.2
	3:58p	1:20p	1.0f		11:28a	1.8	1:58p	5.2	2:47p	6.3
	11:30p	7:41p	1.4e		4:48p	4.6	9:15p	0.4	9:48p	0.4
Wed. 10/25	6:14a	2:20a	1.2f		12:49a	0.2	4:18a	4.2	4:41a	5.2
	11:37a	8:46a	0.8e		7:36a	3.6	9:01a	3.1	9:39a	3.5
	4:42p	2:09p	0.9f		12:18p	2.0	2:41p	4.9	3:27p	6.0
	8:24p	1:3e			5:31p	4.4	10:08p	0.6	10:36p	0.6
Thu. 10/26	12:14a	3:11a	1.0f		1:40a	0.2	5:23a	4.2	5:40a	5.1
	7:09a	9:40a	0.8e		8:36a	3.6	10:07a	3.3	10:36a	3.7
	12:41p	3:05p	0.8f		1:18p	2.0	3:35p	4.7	4:18p	5.7
	5:35p	9:14p	1.2e		6:23p	4.1	11:05p	0.7	11:30p	0.9

SAN MATEO CURRENTS
PORT CHICAGO
ARENA COVE
HUMBOLDT BAY

	SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots			Time	Feet	Time	Feet	Time	Feet
Fri. 10/27	1:04a	4:06a	1.0 f			2:36a	0.3	6:26a	4.3	6:41a	5.1
	8:05a	10:43a	0.8 e			9:33a	3.6	11:26a	3.2	11:50a	3.7
	1:53p	4:07p	0.7 f			2:28p	2.0	4:43p	4.5	5:23p	5.4
Sat. 10/28	1:58a	5:04a	1.0 f			7:29p	3.8				
	8:59a	11:47a	0.9 e			3:33a	0.3	12:04a	0.8	12:29a	1.0
	3:03p	5:12p	0.7 f			10:24a	3.7	7:17a	4.5	7:39a	5.3
	7:58p	11:15p	1.1 e			3:39p	1.8	12:41p	3.0	1:07p	3.5
Sun. 10/29	2:53a	5:59a	1.1 f			8:51p	3.7	5:58p	4.4	6:37p	5.3
	9:47a	12:46p	1.1 e			4:26a	0.2	12:58a	0.9	1:27a	1.1
	4:03p	6:16p	0.8 f			11:08a	3.9	7:58a	4.7	8:28a	5.6
	9:11p					4:45p	1.5	1:41p	2.6	2:13p	3.1
Mon. 10/30	3:47a	12:19a	1.2 e			10:12p	3.7	7:09p	4.5	7:48p	5.3
	10:30a	6:48a	1.3 f			5:12a	0.2	1:47a	0.9	2:21a	1.1
	4:53p	1:36p	1.3 e			11:46a	4.1	8:32a	5.0	9:10a	5.9
	10:16p	7:14p	1.0 f			5:42p	1.1	2:31p	2.1	3:08p	2.4
Tue. 10/31	4:37a	1:19a	1.3 e			11:18p	3.8	8:11p	4.6	8:53p	5.5
	11:08a	7:33a	1.4 f			5:53a	0.3	2:31a	0.9	3:09a	1.0
	5:37p	2:20p	1.5 e			12:18p	4.3	9:03a	5.3	9:47a	6.3
	11:15p	8:05p	1.3 f			6:33p	0.7	3:15p	1.5	3:55p	1.7
Wed. 11/1	5:27a	2:16a	1.4 e			7:21p	0.4	9:07p	4.8	9:52p	5.7
	11:43a	8:16a	1.5 f			12:15a	3.9	3:12a	1.0	3:53a	1.1
	6:18p	3:01p	1.7 e			6:31a	0.4	9:34a	5.7	10:22a	6.8
	8:53p	1:55p	1.5 f			12:47p	4.6	3:57p	0.8	4:39p	0.9
Thu. 11/2	12:10a	3:10a	1.5 e			7:21p	0.4	10:00p	5.0	10:46p	6.0
	6:15a	8:59a	1.7 f			1:09a	4.0	3:51a	1.1	4:35a	1.2
	12:17p	3:41p	1.9 e			7:09a	0.6	10:06a	6.0	10:57a	7.2
	6:59p	9:39p	1.7 f			1:14p	4.8	4:39p	0.2	5:22p	0.1
Fri. 11/3	1:04a	4:04a	1.6 e			8:07p	0.0	10:51p	5.1	11:38p	6.2
	7:03a	9:41a	1.7 f			2:02a	4.1	4:31a	1.3	5:17a	1.3
	12:51p	4:22p	2.0 e			7:48a	0.8	10:40a	6.4	11:32a	7.6
	7:40p	10:24p	1.9 f			1:44p	5.1	5:22p	-0.4	6:05p	-0.5
Sat. 11/4	1:57a	4:57a	1.6 e			8:54p	-0.2	11:42p	5.2		
	7:50a	10:25a	1.8 f			2:55a	4.1	5:11a	1.5	12:29a	6.3
	1:27p	5:05p	2.1 e			8:29a	1.0	11:17a	6.6	5:59a	1.6
	8:24p	11:10p	2.0 f			2:17p	5.3	6:08p	-0.8	12:10p	7.9
Sun. 11/5	1:52a	4:49a	1.6 e			9:42p	-0.4			6:50p	-1.0
	7:38a	10:10a	1.7 f			2:50a	4.1	4:53a	1.8	12:20a	6.3
	1:06p	4:50p	2.1 e			8:14a	1.2	10:56a	6.7	5:42a	1.9
	8:10p	10:57p	2.0 f			1:56p	5.5	5:55p	-1.1	11:49a	8.0
Mon. 11/6	2:47a	5:42a	1.6 e			9:31p	-0.5			6:36p	-1.3
	8:27a	10:57a	1.7 f			3:48a	4.1	12:30a	5.1	1:14a	6.3
	1:50p	5:37p	2.1 e			9:02a	1.3	5:39a	2.1	6:27a	2.3
	9:00p	11:47p	1.9 f			2:39p	5.5	11:40a	6.7	12:32p	8.0
Tue. 11/7	3:45a	6:37a	1.5 e			10:23p	-0.6	6:46p	-1.2	7:25p	-1.4
	9:20a	11:48a	1.6 f			4:47a	4.0	1:29a	5.0	2:09a	6.1
	2:39p	6:27p	2.0 e			9:56a	1.5	6:30a	2.5	7:17a	2.6
	9:52p					3:27p	5.3	12:28p	6.5	1:19p	7.8
Wed. 11/8	4:45a	12:40a	1.8 f			11:18p	-0.6	7:40p	-1.0	8:17p	-1.2
	10:18a	7:34a	1.4 e			5:49a	4.0	2:31a	4.9	3:09a	6.0
	3:34p	12:43p	1.4 f			10:56a	1.6	7:30a	2.7	8:13a	2.9
	10:49p	7:20p	1.9 e			4:22p	5.0	1:22p	6.2	2:12p	7.3
	5:47a	1:39a	1.6 f			8:38p	-0.8	8:38p	-0.8	9:12p	-0.9
Thu. 11/9	11:23a	8:37a	1.3 e			12:16a	-0.5	3:38a	4.9	4:11a	5.9
	4:38p	1:43p	1.2 f			6:53a	4.0	8:41a	2.8	9:19a	3.1
	11:50p	8:19p	1.7 e			12:04p	1.6	2:25p	5.7	3:13p	6.8
Fri. 11/10	6:50a	2:43a	1.5 f			5:26p	4.6	9:40p	-0.4	10:12p	-0.4
	12:34p	9:45a	1.3 e			1:18a	-0.4	4:43a	5.0	5:16a	6.0
	5:50p	2:49p	1.1 f			7:54a	4.0	10:04a	2.8	10:36a	3.1
	9:25p	9:25p	1.5 e			1:18p	1.5	3:38p	5.3	4:24p	6.3
Sat. 11/11	12:54a	3:52a	1.4 f			6:47p	4.2	10:43p	-0.1	11:14p	0.0
	7:50a	10:55a	1.4 e			2:19a	-0.3	5:44a	5.2	6:19a	6.1
	1:46p	4:00p	1.0 f			8:52a	4.2	11:28a	2.5	11:57a	2.8
	7:08p	10:37p	1.4 e			2:35p	1.2	5:00p	4.9	5:41p	5.8
Sun. 11/12	1:56a	5:00a	1.4 f			8:14p	3.9	11:44p	0.3		
	8:45a	12:00p	1.5 e			3:17a	-0.2	6:36a	5.5	12:17a	0.4
	2:53p	5:13p	1.1 f			9:45a	4.4	12:41p	2.0	7:15a	6.4
	8:25p	11:49p	1.3 e			3:46p	0.8	6:19p	4.7	1:13p	2.3
Mon. 11/13	2:55a	5:57a	1.4 f			9:31p	3.8			6:59p	5.6
	9:33a	12:57p	1.7 e			4:09a	-0.1	12:41a	0.6	1:15a	0.8
	3:52p	6:21p	1.2 f			10:32a	4.6	7:22a	5.7	8:04a	6.7
	9:34p					4:49p	0.4	1:42p	1.4	2:16p	1.7
	3:49a	12:53a	1.3 e			10:36p	3.8	7:31p	4.7	8:11p	5.6
Tue. 11/14	10:14a	6:43a	1.4 f			4:56a	0.1	1:31a	1.0	2:08a	1.1
	4:44p	1:48p	1.8 e			11:14a	4.8	8:01a	5.9	8:46a	7.0
	10:37p	7:19p	1.4 f			5:45p	0.1	2:33p	0.8	3:09p	1.0
Wed. 11/15	4:39a	1:50a	1.3 e			11:34p	3.8	8:34p	4.7	9:15p	5.6
	10:50a	7:23a	1.4 f			5:38a	0.4	2:17a	1.3	2:56a	1.4
	5:31p	2:33p	1.8 e			11:51a	4.9	8:37a	6.1	9:24a	7.2
	11:33p	8:10p	1.5 f			6:35p	-0.1	3:18p	0.4	3:54p	0.5
	5:26a	2:40a	1.2 e			7:21p	-0.3	9:29p	4.7	10:10p	5.7
Thu. 11/16	11:21a	8:00a	1.4 f			12:27a	3.9	2:57a	1.7	3:39a	1.8
	6:14p	3:12p	1.8 e			6:17a	0.7	9:09a	6.1	9:58a	7.3
	8:55p	1:6f				12:24p	5.0	3:58p	0.0	4:35p	0.0
Fri. 11/17	12:25a	3:26a	1.2 e			7:21p	-0.3	10:18p	4.7	10:59p	5.7
	6:09a	8:37a	1.3 f			1:17a	3.9	3:35a	2.0	4:19a	2.1
	11:49a	3:46p	1.8 e			6:53a	1.1	9:40a	6.2	10:31a	7.4
	6:55p	9:36p	1.6 f			12:52p	5.0	4:35p	-0.2	5:13p	-0.3
Sat. 11/18	1:14a	4:08a	1.1 e			8:05p	-0.3	11:04p	4.7	11:44p	5.8
	6:50a	9:13a	1.3 f			2:06a	3.9	4:11a	2.3	4:57a	2.5
	12:16p	4:15p	1.7 e			7:28a	1.4	10:10a	6.1	11:02a	7.3
	7:34p	10:16p	1.6 f			1:16p	4.9	5:11p	-0.3	5:49p	-0.4
						8:46p	-0.3	11:48p	4.7		

SAN MATEO CURRENTS
PORT CHICAGO
ARENA COVE
HUMBOLDT BAY

	SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots	Time	Feet	Time	Feet	Time	Feet	Time	Feet
Sun. 11/19	1:59a	4:48a	1.1e	2:55a	3.9	4:46a	2.6	12:26a	5.7		
	7:29a	9:51a	1.2f	8:04a	1.7	10:40a	6.0	5:33a	2.8		
	12:44p	4:39p	1.7e	1:39p	4.9	5:47p	-0.3	11:33a	7.3		
	8:10p	10:53p	1.6f	9:25p	-0.2			6:25p	-0.5		
Mon. 11/20	2:43a	5:25a	1.0e	3:43a	3.9	12:31a	4.6	1:07a	5.7		
	8:08a	10:30a	1.2f	8:41a	1.9	5:21a	2.8	6:10a	3.0		
	1:14p	5:04p	1.6e	2:05p	4.9	11:11a	5.9	12:04p	7.1		
	8:45p	11:30p	1.5f	10:01p	-0.2	6:24p	-0.3	7:01p	-0.4		
Tue. 11/21	3:25a	6:03a	1.0e	4:31a	3.8	1:15a	4.6	1:49a	5.6		
	8:47a	11:11a	1.1f	9:20a	2.0	5:59a	3.0	6:47a	3.3		
	1:48p	5:35p	1.6e	2:37p	4.8	11:44a	5.7	12:36p	6.9		
	9:18p			10:36p	-0.1	7:02p	-0.1	7:38p	-0.2		
Wed. 11/22	4:06a	12:08a	1.4f	5:19a	3.8	2:02a	4.5	2:32a	5.5		
	9:30a	6:42a	0.9e	10:04a	2.0	6:41a	3.2	7:27a	3.5		
	2:26p	11:55a	1.0f	3:14p	4.7	12:20p	5.5	1:11p	6.6		
	9:50p	6:11p	1.5e	11:12p	-0.1	7:43p	0.1	8:17p	0.0		
Thu. 11/23	4:48a	12:47a	1.3f	6:08a	3.7	2:52a	4.5	3:18a	5.5		
	10:19a	7:24a	0.9e	10:53a	2.0	7:31a	3.3	8:12a	3.7		
	3:09p	12:42p	0.9f	3:58p	4.4	1:01p	5.2	1:50p	6.2		
	10:24p	6:52p	1.4e	11:50p	-0.1	8:27p	0.3	8:59p	0.3		
Fri. 11/24	5:31a	1:29a	1.2f	6:57a	3.7	3:44a	4.5	4:07a	5.4		
	11:16a	8:11a	0.9e	11:50a	2.0	8:33a	3.4	9:06a	3.8		
	3:59p	1:34p	0.8f	4:49p	4.1	1:49p	4.9	2:36p	5.9		
	11:03p	7:39p	1.3e			9:14p	0.5	9:45p	0.6		
Sat. 11/25	6:16a	2:15a	1.2f	12:33a	0.0	4:35a	4.7	4:58a	5.5		
	12:20p	9:03a	1.0e	7:46a	3.7	9:46a	3.3	10:13a	3.7		
	4:59p	2:32p	0.7f	12:54p	1.8	2:50p	4.5	3:34p	5.5		
	11:50p	8:33p	1.2e	5:51p	3.8	10:04p	0.8	10:34p	0.8		
Sun. 11/26	7:02a	3:05a	1.2f	1:21a	0.1	5:21a	4.8	5:47a	5.7		
	1:24p	9:58a	1.1e	8:32a	3.8	11:02a	3.0	11:26a	3.5		
	6:13p	3:34p	0.7f	2:05p	1.6	4:04p	4.3	4:47p	5.2		
	9:33p	1:13p		7:08p	3.5	10:55p	1.0	11:27p	1.1		
Mon. 11/27	12:45a	3:58a	1.3f	2:12a	0.2	6:01a	5.1	6:34a	6.0		
	7:46a	10:52a	1.2e	9:14a	4.0	12:08p	2.5	12:36p	2.9		
	2:22p	4:37p	0.8f	3:14p	1.3	5:24p	4.2	6:04p	5.0		
	7:33p	10:38p	1.1e	8:35p	3.4	11:46p	1.2				
Tue. 11/28	1:46a	4:51a	1.3f	3:03a	0.3	6:37a	5.4	12:21a	1.3		
	8:29a	11:43a	1.4e	9:50a	4.2	1:03p	1.9	7:17a	6.4		
	3:13p	5:38p	1.0f	4:16p	0.9	6:40p	4.2	1:36p	2.2		
	8:48p	11:43p	1.2e	9:52p	3.4			7:19p	5.1		
Wed. 11/29	2:48a	5:43a	1.4f	3:51a	0.5	12:34a	1.4	1:15a	1.5		
	9:10a	12:32p	1.6e	10:23a	4.5	7:13a	5.8	7:57a	6.8		
	4:01p	6:35p	1.3f	5:11p	0.4	1:52p	1.1	2:28p	1.3		
	9:56p			10:58p	3.6	7:47p	4.4	8:28p	5.3		
Thu. 11/30	3:47a	12:47a	1.3e	4:37a	0.7	1:21a	1.6	2:06a	1.7		
	9:49a	6:34a	1.5f	10:55a	4.9	7:48a	6.2	8:37a	7.3		
	4:47p	1:19p	1.8e	6:03p	0.0	2:38p	0.4	3:17p	0.5		
	10:58p	7:28p	1.5f	11:58p	3.7	8:48p	4.6	9:30p	5.5		
Fri. 12/1	4:43a	1:49a	1.4e	5:24a	1.0	2:08a	1.8	2:55a	1.9		
	10:30a	7:24a	1.6f	11:29a	5.2	8:26a	6.6	9:17a	7.8		
	5:33p	2:06p	2.0e	6:53p	-0.3	3:23p	-0.3	4:03p	-0.4		
	11:56p	8:18p	1.8f			9:44p	4.8	10:28p	5.8		
Sat. 12/2	5:38a	2:48a	1.4e	12:55a	3.9	2:54a	2.0	3:43a	2.1		
	11:12a	8:13a	1.6f	6:11a	1.2	9:05a	7.0	9:58a	8.2		
	6:20p	2:54p	2.1e	12:06p	5.5	4:08p	-0.9	4:49p	-1.1		
	9:07p	1:19f		7:42p	-0.5	10:38p	5.0	11:22p	6.1		
Sun. 12/3	12:53a	3:45a	1.5e	1:51a	4.0	3:41a	2.2	4:31a	2.3		
	6:30a	9:01a	1.7f	7:00a	1.4	9:48a	7.2	10:41a	8.5		
	11:56a	3:43p	2.2e	12:47p	5.7	4:55p	-1.4	5:35p	-1.6		
Mon. 12/4	7:08p	9:56p	2.0f	8:31p	-0.7	11:31p	5.1				
	1:48a	4:40a	1.5e	2:47a	4.1	4:29a	2.4	12:15a	6.2		
	7:22a	9:50a	1.7f	7:52a	1.6	10:32a	7.3	5:20a	2.5		
	12:44p	4:32p	2.3e	1:32p	5.8	5:43p	-1.5	11:25a	8.6		
	7:57p	10:44p	2.1f	9:21p	-0.8			6:22p	-1.8		
Tue. 12/5	2:43a	5:34a	1.6e	3:42a	4.2	12:25a	5.2	1:07a	6.3		
	8:14a	10:40a	1.7f	8:47a	1.6	5:21a	2.5	6:10a	2.6		
	1:33p	5:22p	2.2e	2:20p	5.7	11:20a	7.2	12:13p	8.4		
	8:46p	11:34p	2.0f	10:11p	-0.8	6:32p	-1.5	7:11p	-1.8		
Wed. 12/6	3:37a	6:28a	1.5e	4:37a	4.2	1:19a	5.3	2:00a	6.4		
	9:09a	11:32a	1.6f	9:45a	1.6	6:17a	2.7	7:04a	2.8		
	2:26p	6:12p	2.1e	3:12p	5.4	12:10p	6.8	1:03p	8.1		
	9:35p			11:01p	-0.7	7:23p	-1.2	8:00p	-1.5		
Thu. 12/7	4:31a	12:25a	1.9f	5:32a	4.2	2:16a	5.3	2:54a	6.4		
	10:07a	7:23a	1.5e	10:47a	1.6	7:20a	2.8	8:03a	2.9		
	3:22p	12:27p	1.4f	4:10p	5.0	1:06p	6.4	1:57p	7.5		
	10:27p	7:03p	1.9e	11:52p	-0.6	8:16p	-0.8	8:52p	-1.0		
Fri. 12/8	5:25a	1:18a	1.8f	6:28a	4.3	3:13a	5.4	3:50a	6.4		
	11:11a	8:21a	1.5e	11:53a	1.5	8:31a	2.8	9:08a	3.0		
	4:24p	1:26p	1.3f	5:15p	4.5	2:07p	5.8	2:57p	6.8		
	11:20p	7:57p	1.7e			9:11p	-0.3	9:45p	-0.4		
Sat. 12/9	6:19a	2:14a	1.6f	12:45a	-0.4	4:10a	5.5	4:46a	6.5		
	12:18p	9:22a	1.5e	7:23a	4.3	9:51a	2.7	10:21a	2.9		
	5:33p	2:31p	1.1f	1:05p	1.3	3:19p	5.1	4:04p	6.1		
	8:57p	1:55p	1.5e	6:33p	4.0	10:07p	0.3	10:40p	0.2		
Sun. 12/10	12:17a	3:12a	1.5f	1:38a	-0.2	5:06a	5.7	5:42a	6.6		
	7:11a	10:27a	1.5e	8:17a	4.5	11:12a	2.3	11:39a	2.6		
	1:27p	3:40p	1.0f	2:19p	1.0	4:39p	4.6	5:19p	5.5		
	6:49p	10:04p	1.2e	7:57p	3.7	11:03p	0.8	11:37p	0.9		
Mon. 12/11	1:16a	4:11a	1.4f	2:32a	0.1	5:57a	5.9	6:35a	6.8		
	8:01a	11:30a	1.6e	9:09a	4.6	12:27p	1.8	12:54p	2.1		
	2:32p	4:54p	1.1f	3:31p	0.7	6:04p	4.4	6:38p	5.2		
	8:08p	11:16p	1.1e	9:15p	3.5	11:59p	1.3				

SAN MATEO CURRENTS

PORT CHICAGO

ARENA COVE

HUMBOLDT BAY

	SLACK			CURRENT		TIDE		TIDE		TIDE	
	Time	Time	Knots			Time	Feet	Time	Feet	Time	Feet
Tue. 12/12	2:16a	5:07a	1.3 f			3:24a	0.4	6:43a	6.0	12:34a	1.5
	8:47a	12:28p	1.6 e			9:56a	4.8	1:29p	1.2	7:23a	7.0
	3:30p	6:06p	1.2 f			4:35p	0.3	7:23p	4.3	1:59p	1.5
	9:22p					10:23p	3.5			7:56p	5.0
Wed. 12/13	3:14a	12:27a	1.0 e			4:13a	0.6	12:52a	1.8	1:29a	1.9
	9:28a	5:58a	1.2 f			10:38a	4.9	7:24a	6.2	8:07a	7.2
	4:23p	1:20p	1.7 e			5:32p	0.0	2:21p	0.7	2:53p	0.9
	10:29p	7:09p	1.3 f			11:23p	3.6	8:31p	4.3	9:07p	5.1
Thu. 12/14	4:09a	1:30a	1.0 e			4:59a	1.0	1:40a	2.2	2:20a	2.4
	10:05a	6:45a	1.2 f			11:16a	5.0	8:02a	6.3	8:47a	7.3
	5:10p	2:05p	1.8 e			6:22p	-0.2	3:06p	0.3	3:39p	0.4
	11:28p	8:02p	1.5 f					9:29p	4.4	10:06p	5.3
Fri. 12/15	5:00a	2:25a	1.0 e			12:18a	3.7	2:24a	2.5	3:07a	2.7
	10:39a	7:28a	1.2 f			5:42a	1.3	8:37a	6.3	9:24a	7.4
	5:54p	2:45p	1.8 e			11:49a	5.1	3:45p	0.0	4:19p	0.0
		8:48p	1.6 f			7:08p	-0.3	10:18p	4.5	10:56p	5.4
Sat. 12/16	12:21a	3:14a	1.0 e			1:09a	3.9	3:05a	2.7	3:50a	2.9
	5:47a	8:09a	1.1 f			6:23a	1.6	9:10a	6.4	9:59a	7.5
	11:12a	3:19p	1.7 e			12:18p	5.1	4:21p	-0.2	4:56p	-0.2
	6:36p	9:29p	1.6 f			7:51p	-0.4	11:01p	4.6	11:39p	5.6
Sun. 12/17	1:08a	3:57a	1.0 e			1:58a	4.0	3:43a	2.9	4:31a	3.1
	6:30a	8:50a	1.1 f			7:02a	1.9	9:42a	6.3	10:33a	7.5
	11:44a	3:47p	1.7 e			12:44p	5.1	4:55p	-0.3	5:31p	-0.4
	7:14p	10:06p	1.6 f			8:30p	-0.3	11:41p	4.7		
Mon. 12/18	1:51a	4:36a	1.0 e			2:44a	4.1	4:21a	3.0	12:18a	5.7
	7:12a	9:30a	1.1 f			7:42a	2.1	10:14a	6.3	5:10a	3.2
	12:18p	4:13p	1.7 e			1:10p	5.1	5:29p	-0.3	11:07a	7.4
	7:49p	10:39p	1.6 f			9:06p	-0.3			6:06p	-0.5
Tue. 12/19	2:30a	5:13a	1.0 e			3:29a	4.1	12:19a	4.8	12:55a	5.7
	7:52a	10:10a	1.1 f			8:22a	2.2	4:58a	3.1	5:48a	3.3
	12:52p	4:40p	1.7 e			1:40p	5.1	10:47a	6.2	11:41a	7.3
	8:20p	11:10p	1.5 f			9:39p	-0.2	6:03p	-0.3	6:40p	-0.5
Wed. 12/20	3:07a	5:48a	1.0 e			4:11a	4.1	12:57a	4.8	1:32a	5.8
	8:32a	10:51a	1.1 f			9:03a	2.2	5:37a	3.2	6:26a	3.4
	1:28p	5:12p	1.6 e			2:15p	5.0	11:21a	6.0	12:15p	7.1
	8:48p	11:41p	1.5 f			10:09p	-0.2	6:38p	-0.2	7:15p	-0.3
Thu. 12/21	3:41a	6:23a	1.1 e			4:51a	4.0	1:35a	4.8	2:09a	5.8
	9:14a	11:33a	1.0 f			9:45a	2.1	6:19a	3.3	7:06a	3.5
	2:06p	5:47p	1.6 e			2:55p	4.9	11:57a	5.8	12:50p	6.8
	9:15p					10:38p	-0.2	7:14p	0.0	7:51p	-0.2
Fri. 12/22	4:15a	12:14a	1.5 f			5:29a	4.0	2:15a	4.9	2:48a	5.8
	9:58a	7:00a	1.1 e			10:31a	2.0	7:06a	3.3	7:49a	3.5
	2:47p	12:18p	1.0 f			3:38p	4.6	12:36p	5.5	1:27p	6.5
	9:45p	6:27p	1.5 e			11:08p	-0.1	7:51p	0.2	8:27p	0.1
Sat. 12/23	4:49a	12:51a	1.5 f			6:07a	4.0	2:56a	4.9	3:29a	5.8
	10:47a	7:39a	1.1 e			11:21a	1.9	8:01a	3.3	8:39a	3.5
	3:33p	1:06p	0.9 f			4:27p	4.3	1:21p	5.2	2:10p	6.1
	10:21p	7:12p	1.4 e			11:42p	0.0	8:30p	0.5	9:06p	0.4
Sun. 12/24	5:24a	1:32a	1.5 f			6:45a	4.0	3:38a	5.1	4:11a	6.0
	11:39a	8:22a	1.2 e			12:19p	1.7	9:06a	3.2	9:37a	3.4
	4:30p	1:58p	0.8 f			5:25p	3.9	2:16p	4.8	3:02p	5.7
	11:05p	8:02p	1.3 e					9:12p	0.9	9:48p	0.8
Mon. 12/25	6:01a	2:18a	1.4 f			12:23a	0.1	4:20a	5.3	4:54a	6.1
	12:36p	9:09a	1.2 e			7:24a	4.1	10:17a	2.9	10:44a	3.1
	5:40p	2:56p	0.8 f			1:26p	1.5	3:25p	4.4	4:08p	5.2
	11:58p	9:00p	1.2 e			6:37p	3.5	9:58p	1.2	10:34p	1.2
Tue. 12/26	6:42a	3:09a	1.4 f			1:10a	0.3	5:01a	5.5	5:38a	6.4
	1:34p	10:00a	1.3 e			8:05a	4.3	11:28a	2.4	11:54a	2.6
	7:03p	3:58p	0.9 f			2:39p	1.2	4:48p	4.1	5:27p	4.9
	10:05p	1:11p	1.1 e			8:06p	3.3	10:48p	1.6	11:26p	1.7
Wed. 12/27	1:00a	4:05a	1.3 f			2:02a	0.6	5:42a	5.9	6:23a	6.8
	7:27a	10:54a	1.5 e			8:46a	4.5	12:32p	1.7	1:00p	1.9
	2:32p	5:03p	1.1 f			3:48p	0.8	6:14p	4.1	6:50p	4.8
	8:26p	11:15p	1.1 e			9:33p	3.3	11:41p	1.9		
Thu. 12/28	2:08a	5:02a	1.4 f			2:57a	0.9	6:25a	6.2	12:23a	2.1
	8:14a	11:49a	1.6 e			9:28a	4.9	1:28p	0.9	7:09a	7.2
	3:28p	6:06p	1.3 f			4:51p	0.4	7:33p	4.2	2:00p	1.1
	9:42p					10:46p	3.5			8:08p	5.0
Fri. 12/29	3:15a	12:25a	1.1 e			3:54a	1.2	12:36a	2.2	1:22a	2.4
	9:04a	5:59a	1.4 f			10:11a	5.2	7:08a	6.7	7:56a	7.7
	4:22p	12:44p	1.8 e			5:48p	0.0	2:19p	0.2	2:54p	0.2
	10:49p	7:06p	1.5 f			11:49p	3.7	8:40p	4.5	9:18p	5.3
Sat. 12/30	4:18a	1:32a	1.2 e			4:50a	1.5	1:32a	2.4	2:21a	2.6
	9:54a	6:55a	1.5 f			10:55a	5.6	7:54a	7.1	8:44a	8.1
	5:14p	1:39p	2.0 e			6:40p	-0.3	3:07p	-0.5	3:45p	-0.6
	11:50p	8:02p	1.7 f					9:38p	4.8	10:19p	5.6
Sun. 12/31	5:17a	2:36a	1.3 e			12:47a	4.0	2:26a	2.5	3:17a	2.7
	10:46a	7:49a	1.6 f			5:47a	1.7	8:40a	7.4	9:32a	8.5
	6:05p	2:34p	2.1 e			11:41a	5.8	3:55p	-1.1	4:33p	-1.3
	8:54p	1:19p	1.9 f			7:31p	-0.5	10:31p	5.0	11:14p	6.0

GOLDEN GATE

BENICIA BRIDGE

RICHMOND

OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Sun. 1/1	3:27a	12:01a	3.1 f	6:32a	2:47a	1.9 f	4:10a	12:05a	1.8 f	2:43a	4:49a	1.1e						
	8:08a	5:52a	1.1e	11:11a	8:52a	0.8e	8:51a	6:17a	1.0e	7:46a	10:55a	1.4 f						
	2:12p	11:45a	2.6 f	4:53p	2:08p	1.9 f	2:32p	11:45a	1.6 f	1:39p	4:30p	1.7e						
	9:17p	5:08p	2.4e		8:08p	2.3e	9:49p	6:07p	2.5e	7:36p	11:41p	1.5 f						
Mon. 1/2	4:04a	12:44a	3.1 f	12:20a	3:19a	1.9 f	4:46a	12:42a	1.8 f	3:19a	5:30a	1.1e						
	8:58a	6:33a	1.1e	7:06a	9:31a	0.8e	9:42a	6:59a	1.1e	8:25a	11:39a	1.4 f						
	2:59p	12:33p	2.4 f	12:04p	2:58p	1.8 f	3:20p	12:35p	1.5 f	2:27p	5:19p	1.6e						
	9:55p	5:53p	2.2e	5:43p	8:56p	2.2e	10:27p	6:52p	2.4e	8:20p								
Tue. 1/3	4:45a	1:29a	3.1 f	12:57a	3:55a	2.0 f	5:25a	1:24a	1.8 f	3:59a	12:20a	1.5 f						
	9:54a	7:21a	1.2e	7:41a	10:12a	0.9e	10:43a	7:46a	1.2e	9:10a	6:15a	1.1e						
	3:52p	1:27p	2.2 f	1:04p	3:52p	1.6 f	4:16p	1:29p	1.4 f	3:22p	12:28p	1.3 f						
	10:36p	6:47p	2.0 e	6:39p	9:49p	2.0 e	11:10p	7:43p	2.1e	9:11p	6:14p	1.5e						
Wed. 1/4	5:30a	2:17a	3.1 f	1:36a	4:36a	2.0 f	6:06a	2:11a	1.9 f	4:44a	1:06a	1.5 f						
	10:59a	8:15a	1.3e	8:19a	11:00a	1.1e	11:56a	8:39a	1.3e	10:05a	7:04a	1.2e						
	4:54p	2:26p	2.0 f	2:13p	4:54p	1.4 f	5:23p	2:30p	1.2 f	4:29p	1:24p	1.2 f						
	11:21p	7:54p	1.7e	7:46p	10:48p	1.7e	11:58p	8:39p	1.8e	10:09p	7:14p	1.3e						
Thu. 1/5	6:19a	3:07a	3.1 f	2:17a	5:22a	2.0 f	6:53a	3:01a	1.9 f	5:35a	1:59a	1.5 f						
	12:15p	9:12a	1.5e	9:00a	11:53a	1.2e	1:15p	9:40a	1.5e	11:11a	7:58a	1.2e						
	6:11p	3:30p	2.0 f	3:31p	6:08p	1.2 f	6:45p	3:38p	1.1 f	5:51p	2:31p	1.1 f						
	9:13p	1.4e		9:04p	11:51p	1.4e		9:42p	1.5e	11:15p	8:20p	1.2e						
Fri. 1/6	12:11a	4:00a	3.1 f	3:02a	6:13a	2.1 f	12:50a	3:54a	1.9 f	6:29a	2:58a	1.5 f						
	7:08a	10:09a	1.8e	9:45a	12:52p	1.4e	7:42a	10:46a	1.7e	12:25p	8:54a	1.3e						
	1:39p	4:39p	2.0 f	4:51p	7:36p	1.2 f	2:31p	4:54p	1.1 f	7:17p	3:55p	1.1 f						
	7:37p	10:30p	1.3e	10:26p			8:17p	10:52p	1.3e	9:30p		1.1e						
Sat. 1/7	1:04a	4:55a	3.2 f	3:51a	12:56a	1.2e	1:46a	4:49a	1.9 f	12:27a	4:00a	1.5 f						
	7:57a	11:04a	2.2e	10:32a	7:07a	2.1 f	8:32a	11:52a	2.0e	7:24a	9:51a	1.4e						
	2:55p	5:48p	2.3 f	6:06p	1:55p	1.7e	3:40p	6:27p	1.2 f	1:38p	5:36p	1.2 f						
	8:56p	11:35p	1.2e	11:43p	8:58p	1.4 f	9:42p			8:34p	10:42p	1.1e						
Sun. 1/8	1:58a	5:51a	3.3 f	4:43a	2:02a	1.0e	2:44a	12:04a	1.1e	1:37a	5:03a	1.5 f						
	8:45a	11:53a	2.5e	11:19a	8:03a	2.2 f	9:23a	5:45a	1.9 f	8:18a	10:48a	1.5e						
	4:01p	6:51p	2.7 f	7:10p	3:01p	1.9e	4:42p	12:52p	2.3e	2:46p	6:56p	1.5 f						
	10:04p			10:03p	1.7 f		10:56p	7:58p	1.5 f	9:42p	11:50p	1.1e						
Mon. 1/9	2:55a	12:31a	1.2e	12:52a	3:07a	0.9e	3:41a	1:11a	1.1e	2:44a	6:03a	1.5 f						
	9:33a	6:45a	3.4 f	5:37a	8:57a	2.3 f	10:13a	6:41a	1.9 f	9:11a	11:42a	1.7e						
	4:59p	12:38p	2.7 e	12:07p	4:12p	2.1e	5:38p	1:46p	2.6e	3:47p	7:59p	1.7 f						
Tue. 1/10	3:56a	1:24a	1.2e	1:55a	4:11a	0.9e	12:00a	2:13a	1.1e	3:46a	12:52a	1.2e						
	10:22a	7:38a	3.5 f	6:34a	9:49a	2.4 f	4:38a	7:36a	2.0 f	10:02a	6:59a	1.6 f						
	5:52p	1:23p	2.8 e	12:56p	5:14p	2.2e	11:02a	2:36p	2.8e	4:42p	12:34p	1.8e						
	11:56p	8:39p	3.4 f	8:56p	11:50p	2.1 f	6:28p	9:55p	1.9 f	11:37p	8:53p	1.9 f						
Wed. 1/11	5:01a	2:19a	1.3e	2:52a	5:14a	1.0e	12:56a	3:10a	1.1e	4:44a	1:49a	1.3e						
	11:12a	8:30a	3.5 f	7:32a	10:41a	2.4 f	5:33a	8:28a	2.0 f	10:52a	7:53a	1.6 f						
	6:42p	2:12p	2.9 e	1:45p	6:05p	2.3e	11:50a	3:24p	2.9 e	5:31p	1:24p	1.8e						
	9:29p	3.6 f		9:43p			7:15p	10:42p	2.0 f	9:42p	2:0 f							
Thu. 1/12	12:46a	3:18a	1.3e	3:46a	12:39a	2.2 f	1:47a	4:04a	1.2e	12:27a	2:41a	1.3e						
	6:04a	9:22a	3.5 f	8:29a	6:13a	1.0e	6:28a	9:19a	2.0 f	5:37a	8:45a	1.6 f						
	12:03p	3:09p	2.8 e	2:34p	11:32a	2.4 f	12:38p	4:09p	2.9e	11:41a	2:12p	1.8e						
	7:29p	10:17p	3.8 f	10:27p	6:48p	2.3e	7:59p	11:25p	2.1 f	6:16p	10:26p	2.0 f						
Fri. 1/13	1:36a	4:16a	1.4 e	4:37a	1:26a	2.3 f	2:34a	4:54a	1.3e	1:14a	3:29a	1.4 e						
	7:03a	10:13a	3.5 f	9:26a	7:09a	1.1e	7:21a	10:08a	2.0 f	6:27a	9:32a	1.6 f						
	12:54p	4:08p	2.7 e	3:24p	12:23p	2.3 f	1:25p	4:53p	2.8e	12:28p	2:59p	1.8e						
	8:14p	11:03p	3.8 f	11:09p	7:26p	2.2e	8:40p			6:57p	11:06p	1.9 f						
Sat. 1/14	2:24a	5:09a	1.5e	5:26a	2:12a	2.3 f	3:18a	12:02a	2.0 f	1:58a	4:13a	1.4e						
	8:01a	11:03a	3.3 f	10:23a	8:01a	1.1e	8:14a	5:41a	1.3e	7:14a	10:16a	1.6 f						
	1:46p	5:03p	2.6 e	4:14p	1:15p	2.1 f	2:12p	10:57a	1.9 f	1:15p	3:46p	1.7e						
	8:57p	11:49p	3.7 f	11:49p	8:03p	2.2e	9:19p	5:35p	2.7e	7:35p	11:41p	1.8 f						
Sun. 1/15	3:12a	5:59a	1.5e	6:13a	2:55a	2.3 f	4:00a	12:32a	1.9 f	2:41a	4:56a	1.3e						
	8:56a	11:54a	3.0 f	11:20a	8:52a	1.2e	9:07a	6:27a	1.4e	8:00a	11:00a	1.5 f						
	2:38p	5:54p	2.3 e	5:05p	2:07p	1.9 f	3:00p	11:46a	1.7 f	2:02p	4:33p	1.6e						
	9:36p			8:43p	2.1e		9:57p	6:17p	2.4e	8:13p								
Mon. 1/16	3:59a	12:35a	3.5 f	12:28a	3:37a	2.3 f	4:41a	1:01a	1.9 f	3:22a	12:10a	1.6 f						
	9:52a	6:50a	1.5e	6:58a	9:44a	1.2e	10:03a	7:12a	1.4e	8:46a	5:38a	1.3e						
	3:32p	12:46p	2.6 f	12:18p	3:01p	1.6 f	3:50p	12:37p	1.5 f	2:52p	11:44a	1.4 f						
	10:14p	6:47p	2.0 e	5:58p	9:28p	1.9e	10:36p	7:00p	2.1 e	8:52p	5:21p	1.5e						
Tue. 1/17	4:48a	1:22a	3.3 f	1:07a	4:17a	2.2 f	5:22a	1:33a	1.8 f	4:04a	12:38a	1.5 f						
	10:54a	7:42a	1.4 e	7:43a	10:38a	1.2e	11:04a	8:01a	1.4e	9:33a	6:21a	1.2e						
	4:31p	1:42p	2.2 f	1:21p	3:59p	1.4 f	4:44p	1:31p	1.3 f	3:46p	12:32p	1.3 f						
	10:49p	7:43p	1.7 e	6:55p	10:19p	1.6 e	11:17p	7:47p	1.8 e	9:35p	6:14p	1.3e						
Wed. 1/18	5:39a	2:10a	3.0 f	1:45a	4:58a													

GOLDEN GATE

BENICIA BRIDGE

RICHMOND

OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Tue. 1/24	3:10a	1:02a	0.9e	2:00a	4:21a	0.8e	4:23a	2:08a	0.8e	3:26a	12:43a	1.0e	9:27a	6:16a	1.3f			
	10:01a	7:04a	2.3f	6:23a	9:29a	1.9f	10:33a	7:07a	1.4f	4:02p	11:55a	1.3e						
	5:37p	1:05p	1.7e	12:35p	5:01p	1.9e	6:00p	2:13p	2.1e									
	11:43p	8:26p	2.4f	8:33p	11:39p	1.9f				9:38p	1.6f		11:06p	8:18p	1.6f			
Wed. 1/25	3:59a	1:46a	1.0e	2:49a	5:10a	0.8e	12:34a	2:52a	0.9e	4:15a	1:28a	1.1e	10:08a	7:04a	1.3f			
	10:37a	7:48a	2.4f	7:11a	10:11a	1.9f	5:10a	7:53a	1.5f									
	6:11p	1:36p	1.9e	1:13p	5:21p	2.0e	11:11a	2:43p	2.3e	4:40p	12:37p	1.4e						
	9:02p	2.6f	9:08p				6:37p	10:12p	1.7f	11:48p	8:57p	1.7f						
Thu. 1/26	12:20a	2:31a	1.0e	3:31a	12:17a	1.9f	1:15a	3:31a	0.9e	4:59a	2:06a	1.1e	10:48a	7:50a	1.4f			
	4:48a	8:32a	2.5f	7:57a	5:56a	0.8e	5:53a	8:36a	1.6f	5:13p	1:18p	1.5e						
	11:15a	2:11p	2.0e	1:52p	10:53a	2.0f	11:48a	3:15p	2.4e	9:28p	9:28p	1.7f						
	6:42p	9:38p	2.8f	9:40p	5:32p	2.1e	7:11p	10:34p	1.7f									
Fri. 1/27	12:55a	3:16a	1.1e	4:09a	12:49a	1.9f	1:50a	4:05a	1.0e	12:26a	2:38a	1.1e	5:38a	8:33a	1.4f			
	5:36a	9:16a	2.7f	8:42a	6:37a	0.9e	6:34a	9:18a	1.7f	11:27a	2:00p	1.6e						
	11:54a	2:53p	2.2e	2:32p	11:36a	2.1f	12:25p	3:49p	2.5e	5:43p	9:53p	1.6f						
Sat. 1/28	1:29a	3:59a	1.2e	4:41a	1:15a	1.9f	2:23a	4:38a	1.1e	1:01a	3:09a	1.2e						
	6:23a	10:00a	2.9f	9:26a	7:14a	0.9e	7:13a	10:01a	1.7f	6:13a	9:15a	1.5f						
	12:36p	3:37p	2.3e	3:15p	12:21p	2.1f	1:04p	4:26p	2.6e	12:06p	2:43p	1.7e						
	7:45p	10:52p	3.2f	10:42p	6:32p	2.3e	8:13p	11:03p	1.8f	6:13p	10:16p	1.6f						
Sun. 1/29	2:03a	4:38a	1.4e	5:10a	1:39a	2.0f	2:54a	5:12a	1.2e	1:33a	3:42a	1.2e						
	7:09a	10:43a	3.0f	10:11a	7:46a	1.0e	7:54a	10:44a	1.8f	6:45a	9:55a	1.5f						
	1:19p	4:20p	2.4e	4:00p	1:06p	2.1f	1:45p	5:06p	2.6e	12:47p	3:27p	1.8e						
	8:18p	11:31p	3.3f	11:13p	7:12p	2.3e	8:45p	11:33p	1.9f	6:45p	10:42p	1.6f						
Mon. 1/30	2:37a	5:12a	1.5e	5:38a	2:06a	2.1f	3:25a	5:49a	1.4e	2:05a	4:17a	1.3e						
	7:56a	11:28a	3.0f	10:59a	8:14a	1.1e	8:39a	11:29a	1.8f	7:18a	10:36a	1.5f						
	2:05p	5:02p	2.3e	4:47p	1:54p	2.1f	2:29p	5:48p	2.5e	1:30p	4:13p	1.8e						
	8:52p			11:45p	7:54p	2.2e	9:18p			7:22p	11:13p	1.7f						
Tue. 1/31	3:13a	12:12a	3.4f	6:06a	2:38a	2.1f	3:57a	12:09a	2.0f	2:37a	4:56a	1.4e						
	8:46a	5:47a	1.7e	11:51a	8:43a	1.2e	9:29a	6:29a	1.5e	7:55a	11:18a	1.5f						
	2:53p	12:16p	2.9f	5:38p	2:44p	1.9f	3:18p	12:17p	1.7f	2:18p	5:02p	1.7e						
	9:28p	5:45p	2.2e		8:41p	2.0e	9:54p	6:33p	2.3e	8:04p	11:50p	1.6f						
Wed. 2/1	3:52a	12:56a	3.4f	12:19a	3:14a	2.2f	4:32a	12:50a	2.0f	3:14a	5:39a	1.4e						
	9:38a	6:26a	1.8e	6:38a	9:19a	1.3e	10:27a	7:14a	1.6e	8:38a	12:06p	1.4f						
	3:46p	1:09p	2.7f	12:49p	3:38p	1.7f	4:14p	1:11p	1.5f	3:13p	5:56p	1.5e						
Thu. 2/2	4:35a	1:42a	3.3f	12:56a	3:55a	2.2f	5:14a	1:35a	2.0f	3:58a	12:35a	1.6f						
	10:37a	7:14a	1.8e	7:16a	10:03a	1.4e	11:37a	8:05a	1.7e	9:31a	6:28a	1.4e						
	4:49p	2:06p	2.5f	1:57p	4:41p	1.5f	5:23p	2:12p	1.3f	4:23p	1:03p	1.2f						
	10:50p	7:40p	1.6e	7:42p	10:28p	1.4e	11:21p	8:18p	1.6e	9:48p	6:56p	1.3e						
Fri. 2/3	5:23a	2:32a	3.1f	1:37a	4:42a	2.1f	6:02a	2:26a	1.9f	4:49a	1:27a	1.5f						
	11:45a	8:09a	1.9e	8:02a	10:56a	1.5e	12:56p	9:04a	1.8e	10:37a	7:21a	1.4e						
	6:04p	3:09p	2.3f	3:15p	5:59p	1.3f	6:48p	3:22p	1.1f	5:49p	2:16p	1.1f						
	11:40p	8:56p	1.3e	9:02p	11:33p	1.1e				10:56p	8:04p	1.0e						
Sat. 2/4	6:17a	3:26a	3.0f	2:24a	5:34a	2.1f	12:15a	3:21a	1.8f	5:48a	2:27a	1.4f						
	1:04p	9:10a	2.0e	8:56a	12:01p	1.5e	6:58a	10:14a	1.9e	11:56a	8:19a	1.4e						
	7:29p	4:16p	2.3f	4:39p	7:36p	1.3f	2:16p	4:54p	1.1f	7:15p	4:03p	1.1f						
	10:13p	1.1e	10:26p				8:21p	10:39p	1.0e	9:19p	0.9e							
Sun. 2/5	12:38a	4:23a	2.9f	3:20a	12:45a	0.9e	1:19a	4:21a	1.7f	12:14a	3:33a	1.4f						
	7:15a	10:15a	2.1e	9:55a	6:34a	2.0f	7:59a	11:30a	2.0e	6:51a	9:20a	1.4e						
	2:23p	5:25p	2.5f	5:56p	1:34p	1.6e	3:28p	6:55p	1.3f	1:20p	5:48p	1.3f						
	8:47p	11:22p	1.1e	11:44p	8:56p	1.5f	9:46p			8:30p	10:38p	1.0e						
Mon. 2/6	1:42a	5:24a	2.9f	4:24a	2:00a	0.8e	2:28a	12:01a	0.9e	1:30a	4:42a	1.4f						
	8:14a	11:21a	2.2e	10:55a	7:38a	2.0f	9:00a	5:24a	1.7f	7:54a	10:23a	1.4e						
	3:33p	6:30p	2.8f	7:00p	3:34p	1.8e	4:31p	12:40p	2.3e	2:35p	6:55p	1.6f						
	9:51p			9:57p	1.8f		10:55p	8:05p	1.6f	9:34p	11:49p	1.1e						
Tue. 2/7	2:51a	12:21a	1.2e	12:50a	3:12a	0.9e	3:35a	1:13a	1.0e	2:39a	5:48a	1.4f						
	9:12a	6:24a	3.0f	5:31a	8:42a	2.1f	9:59a	6:28a	1.7f	8:53a	11:23a	1.5e						
	4:36p	12:19p	2.4e	11:53a	4:39p	2.0e	5:25p	1:39p	2.5e	3:38p	7:49p	1.8f						
	10:46p	7:27p	3.1f	7:53p	10:48p	2.0f	11:52p	8:59p	1.9f	10:30p								
Wed. 2/8	4:03a	1:14a	1.4e	1:47a	4:17a	1.0e	4:36a	2:14a	1.2e	3:41a	12:49a	1.2e						
	10:10a	7:22a	3.2f	6:36a	9:41a	2.1f	10:53a	7:29a	1.8f	9:49a	6:48a	1.5f						
	5:31p	1:14p	2.4e	12:48p	5:30p	2.1e	6:12p	2:29p	2.6e	4:32p	12:18p	1.6e						
	11:35p	8:19p	3.4f	8:39p	11:35p	2.2f	9:45p	2:0f		11:19p	8:38p	2.0f						
Thu. 2/9	5:11a	2:08a	1.5e	2:38a	5:16a	1.1e	12:40a	3:06a	1.3e	4:35a	1:40a	1.4e						
	11:06a	8:17a	3.3f	7:36a	10:35a	2.2f	5:33a	8:24a	1.9f	10:41a	7:43a	1.6f						
	6:22p	2:12p	2.4e	1:40p	6:13p	2.2e	11:43a	3:14p	2.7e	5:17p	1:09p	1.7e						
	9:08p	3:6f	9:21p				6:55p	10:25p	2.1f	9:23p	2:0f							
Fri. 2/10	12:21a	3:04a	1.6e	3:24a	12:19a	2.3f	1:23a	3:54a	1.4e	12:04a	2:26a	1.4e						
	6:12a	9:10a	3.4f	8:32a	6:08a	1												

GOLDEN GATE
BENICIA BRIDGE
RICHMOND
OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT			
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	
Thu. 2/16	4:38a	1:30a	2.8 f	12:50a	3:50a	2.0 f	4:57a	1:15a	1.7 f	3:44a	12:14a	1.4 f	9:30a	6:10a	1.2 e	4:23p	12:47p	1.2 f	
	11:22a	7:39a	1.5e	7:15a	10:09a	1.3e	11:29a	7:51a	1.6e	9:44p	6:42p	1.0e							
	5:25p	2:16p	2.0 f	1:52p	4:39p	1.2 f	5:23p	1:55p	1.2 f	4:24a	12:57a	1.3 f	10:06p	8:01p	1.3e	9:44p	6:42p	1.0e	
	10:39p	8:12p	1.2e	7:43p	10:32p	1.2e	11:06p	8:01p	1.3e	10:20a	6:54a	1.1e							
Fri. 2/17	5:22a	2:15a	2.5 f	1:28a	4:28a	1.8 f	5:36a	1:58a	1.5 f	10:20a	6:54a	1.1e	12:23p	12:47p	1.2 f	4:24a	12:57a	1.3 f	
	12:23p	8:23a	1.3e	7:55a	10:55a	1.3e	12:35p	8:40a	1.5e	10:20a	6:54a	1.1e							
	6:38p	3:15p	1.8 f	3:02p	6:08p	1.0 f	6:37p	2:59p	1.0 f	5:36p	1:47p	1.0 f	11:17p	9:07p	1.0e	10:45p	7:47p	0.8e	
Sat. 2/18	6:09a	3:02a	2.1 f	2:12a	5:13a	1.7 f	6:22a	2:48a	1.4 f	5:12a	1:47a	1.2 f	1:29p	9:11a	1.2e	11:21a	7:43a	1.0e	
	7:54p	4:21p	1.6 f	4:18p	7:42p	1.1 f	8:02p	4:38p	0.9 f	6:52p	3:12p	1.0 f							
	10:04p	0.8e		10:25p			10:15p	0.7e		11:54p	9:01p	0.8e							
Sun. 2/19	12:05a	3:52a	1.9 f	3:04a	12:50a	0.7e	12:57a	3:43a	1.2 f	6:08a	2:45a	1.1 f	6:59a	10:05a	1.1e	12:29p	8:36a	1.0e	
	2:29p	5:31p	1.7 f	5:29p	1:17p	1.4e	7:16a	10:49a	1.5e	8:01p	5:12p	1.1 f							
	8:58p	11:00p	0.8e	11:42p	8:51p	1.3 f	9:25p	11:44p	0.6e	10:22p			1:00a	4:46a	1.7 f	10:45p	7:47p	0.8e	
Mon. 2/20	1:00a	4:46a	1.7 f	4:05a	2:00a	0.7e	2:04a	4:42a	1.2 f	1:04a	3:47a	1.1 f	7:51a	11:01a	1.1e	8:14a	12:00p	1.6e	
	3:21p	6:28p	1.9 f	6:27p	2:40p	1.5e	3:52p	7:40p	1.3 f	1:36p	6:16p	1.3 f	9:50p	11:52p	0.9e	9:00p	11:29p	0.9e	
Tue. 2/21	1:58a	5:41a	1.8 f	12:44a	3:03a	0.8e	3:08a	12:55a	0.7e	2:08a	4:51a	1.1 f	8:41a	11:50a	1.3e	5:08a	8:07a	1.6 f	
	4:07p	7:11p	2.2 f	11:16a	3:37p	1.6e	4:41p	12:53p	1.8e	2:35p	7:05p	1.5 f	10:31p	7:14p	10:29p	1.8 f	11:21p	8:28p	1.5 f
Wed. 2/22	2:54a	12:39a	1.0e	1:34a	3:59a	0.9e	4:04a	1:47a	0.8e	3:04a	12:20a	1.0e	9:28a	6:34a	1.9 f	10:00a	6:40a	1.3 f	
	4:47p	12:33p	1.5e	12:04p	4:16p	1.8e	5:23p	1:35p	2.0e	3:25p	11:22a	1.2e							
	11:07p	7:49p	2.4 f	7:53p	11:08p	1.9 f	9:06p	1.6 f		10:35p	7:46p	1.6 f							
Thu. 2/23	3:47a	1:21a	1.2e	2:16a	4:49a	1.0e	12:01a	2:29a	1.0e	3:53a	1:01a	1.1e	10:13a	7:22a	2.2 f	4:53a	7:32a	1.4 f	
	5:24p	1:13p	1.6e	12:50p	4:43p	1.9e	10:47a	2:11p	2.2e	4:07p	12:10p	1.3e	11:40p	8:26p	2.6 f	6:00p	9:34p	1.7 f	
Fri. 2/24	4:39a	2:03a	1.3e	2:52a	5:33a	1.1e	12:36a	3:04a	1.1e	4:35a	1:34a	1.2e	10:57a	8:09a	2.5 f	5:38a	8:18a	1.6 f	
	6:00p	1:55p	1.8e	1:35p	5:09p	2.0e	11:30a	2:48p	2.3e	4:44p	12:56p	1.5e							
Sat. 2/25	12:12a	2:44a	1.5e	3:22a	12:06a	2.0 f	1:08a	3:37a	1.3e	5:12a	2:05a	1.3e	5:28a	8:56a	1.8 f	6:19a	9:02a	1.8 f	
	11:41a	2:41p	2.0e	2:21p	11:23a	2.1 f	12:13p	3:26p	2.4e	5:18p	1:41p	1.6e	6:35p	9:42p	3.2 f	7:07p	10:00p	1.8 f	
Sun. 2/26	12:44a	3:24a	1.7e	3:48a	12:29a	2.0 f	1:37a	4:09a	1.5e	12:22a	2:36a	1.4e	6:16a	9:42a	3.0 f	7:09p	10:20p	2.2 f	
	12:26p	3:28p	2.1e	3:07p	12:08p	2.2 f	7:00a	9:45a	1.9 f	5:46a	8:57a	1.6 f							
Mon. 2/27	1:16a	4:01a	1.9e	4:13a	12:54a	2.1 f	2:06a	4:43a	1.7e	12:53a	3:09a	1.5e	7:03a	10:27a	3.2 f	10:02a	12:54a	2.0 f	
	1:12p	4:12p	2.2e	3:55p	12:55p	2.2 f	7:43a	10:29a	2.0 f	6:19a	9:38a	1.6 f	7:44p	11:00p	3.5 f	8:11p	10:59p	2.1 f	
Tue. 2/28	1:51a	4:34a	2.1e	4:39a	1:24a	2.2 f	2:35a	5:21a	1.9e	1:25a	3:46a	1.6e	7:49a	11:13a	3.3 f	2:29p	5:30p	2.3e	
	2:00p	4:53p	2.1e	4:46p	1:43p	2.2 f	2:29p	5:30p	2.3e	1:25p	3:58p	1.7e	8:19p	11:40p	3.6 f	8:45p	11:36p	2.1 f	
Wed. 3/1	2:27a	5:08a	2.3e	5:09a	1:58a	2.3 f	3:07a	6:01a	2.0e	1:58a	4:25a	1.6e	8:36a	12:01p	3.2 f	9:19a	12:04p	1.8 f	
	2:50p	5:36p	2.0e	5:40p	2:35p	2.0 f	3:22p	6:16p	2.0e	2:16p	4:48p	1.6e	8:56p	11:40p	3.0 f	9:21p	11:40p	1.7 f	
Thu. 3/2	3:06a	12:23a	3.5 f	5:44a	2:37a	2.3 f	3:44a	12:17a	2.1 f	2:35a	5:08a	1.6e	9:25a	5:45a	2.4 f	10:16a	6:46a	2.1e	
	9:25a	5:45a	2.4e	12:40p	8:37a	1.8e	10:16a	6:46a	2.1e	8:15a	11:54a	1.4 f	3:45p	12:52p	1.7 f	4:23p	12:59p	1.7 f	
	3:45p	12:52p	3.1 f	6:40p	3:31p	1.8 f	4:23p	12:59p	1.7 f	3:16p	5:43p	1.4 e							
Fri. 3/3	9:35p	6:25p	1.7e	9:17p	1.5e		10:02p	7:06p	1.7e	8:37p									
	3:48a	1:10a	3.3 f	12:19a	3:21a	2.3 f	4:27a	1:03a	2.0 f	3:19a	12:09a	1.6 f	10:18a	6:29a	2.4 e	4:48p	11:36p	2.1 f	
	4:48p	1:48p	2.9 f	1:46p	4:37p	1.6 f	5:35p	2:01p	1.4 f	4:29p	12:56p	1.3 f	10:20p	7:29p	1.4 e	11:53p	9:12p	1.0 e	
Sat. 3/4	4:36a	2:00a	3.0 f	1:04a	4:09a	2.1 f	5:18a	1:55a	1.8 f	4:11a	1:03a	1.5 f	11:18a	7:20a	2.3 e	6:03p	4:18p	2.2 f	
	6:03p	2:48p	2.7 f	7:16a	10:16a	1.7 e	12:39p	8:35a	2.0 e	10:12a	6:50a	1.5 e	11:15p	8:47p	1.1 e	6:59p	3:18p	1.2 f	
Sun. 3/5	5:32a	2:56a	2.7 f	1:59a	5:05a	2.0 f	6:20a	2:54a	1.6 f	5:14a	2:04a	1.3 f	12:29p	8:21a	2.1 e	7:24p	4:22p	1.5 f	
	10:02p	1.0e		10:31p			1:57p	9:46a	2.0e	11:34a	7:49a	1.4e							
Mon. 3/6	12:23a	3:57a	2.5 f	3:08a	12:49a	0.8e	1:09a	4:00a	1.5 f	12:11a	3:13a	1.2 f	6:37a	9:32a	2.5 f	1:49p	5:02p	1.6 e	
	6:37a	9:32a	2.0e	9:27a	6:11a	1.8 f	7:32a	11:11a	2.0e	6:25a	8:53a	1.3 e							
	1:49p	5:02p	2.7 f	5:36p	2:09p	1.6 e	3:09p	6:52p	1.5 f	1:03p	5:40p	1.5 f	8:36p	11:12p	1.1 e	5:46p	9:43p	1.0 e	
Tue. 3/7	1:43a	5:02a	2.5 f	4:24a	2:08a	0.9e	2:28a	12:07a	0.9e	1:27a	4:28a	1.3 f	7:48a	10:55a	1.9 e	3:03p	6:08p	2.9 f	
	7:48a	10:55a	1.9e	10:39a	7:24a	1.7 f	8:43a	5:12a	1.4 f	7:35a	10:01a	1.3 e	11:10p	7:56p	3.4 f	9:35p	9:41p	2.0 f	
	9:35p			6:37p	3:31p	1.7 e	4:10p	12:29p	2.2 e	2:19p	6:38p	1.7 f							
Wed. 3/8	3:05a	12:12a	1.4e	12:41a	3:18a	1.1e	3:38a	1:15a	1.1e	2:34a	5:39a	1.4 f	8:59a	6:08a	2.6 f	4:08p	12:09p	2.0 e	
	4:08p	12:09p	2.0e	11:46a	4:29p	1.9e	5:02p	1:29p	2.3e	3:20p	7:28p	1.9 f	10:25p	7:05p	3.2 f	10:08p			
Thu. 3/9	4:18a	1:05a	1.6e	1:31a	4:18a	1.3e	4:39a	2:09a	1.4e	3:32a	12:38a	1.4e	10:04a	7:10a	2.9 f	5:04p	1:10p	2.0e	
	5:04p	1:10p	2.0e	12:44p	5:16p	2.0e	5:46p	2:18p	2.4e	4:10p	12:05p	1.4e	11:10p	7:56p	3.4 f	9:22p	2:19p	2.1 f	
Fri. 3/10	5:20a	1:56a	1.8e	2:15a	5:12a	1.4e	12:13a	2:56a	1.6e	4:22a	1:23a	1.5e	11:03a	8:06a	3.1 f	5:54p	2:07p	2.0e	
	5:54p	2:07p	2.0e	1:37p	5:55p	2.0e	11:37a	3:00p	2.4e	4:52p	12:56p	1.5e	11:53p	8:44p	3.6 f	6:25p	9:56p	2.1 f	
	11:53p	8:44p	3.6 f	8:50p	11:51p	2.4 f				11:34p	8:54p	1.9 f							

GOLDEN GATE
BENICIA BRIDGE
RICHMOND
OAKLAND

SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots		Time	Time	Knots		Time	Time	Knots		Time	Time	Knots		
Sat. 3/11	6:15a	2:47a	2.0e		2:55a	5:59a	1.6e		12:50a	3:38a	1.8e		5:07a	2:03a	1.5e		
	11:58a	9:00a	3.3 f		8:35a	11:25a	2.0 f		6:22a	9:13a	1.9 f		11:19a	8:21a	1.7 f		
	6:39p	3:05p	2.0e		2:25p	6:27p	1.9e		12:24p	3:38p	2.4e		5:29p	1:42p	1.5e		
Sun. 3/12	9:29p	3.7 f	9:24p		4:31a	1:26a	2.3 f		7:01p	10:21p	2.0 f		9:28p	1.8 f			
	1:34a	4:37a	2.1e		10:23a	7:40a	1.6e		2:25a	5:16a	1.9e		1:12a	3:38a	1.5e		
	8:07a	10:50a	3.4 f		4:11p	1:12p	2.0 f		8:07a	10:53a	1.9 f		6:48a	10:03a	1.7 f		
Mon. 3/13	1:51p	4:58p	2.0e		11:11p	3.7 f	10:56p		8:33p	11:34p	1.9 f		1:04p	3:26p	1.5e		
	8:20p	11:11p	3.7 f		7:53p	1.8e	8:33p		2:56a	5:50a	1.9e		7:01p	10:52p	1.7 f		
	2:14a	5:22a	2.2e		5:04a	1:57a	2.3 f		9:04p	11:51p	1.9 f		1:46a	4:09a	1.5e		
Tue. 3/14	8:55a	11:38a	3.3 f		11:09a	8:15a	1.6e		9:32a	12:11p	1.8 f		7:25a	10:41a	1.6 f		
	2:42p	5:44p	1.9e		4:57p	1:57p	1.9 f		3:25a	6:21a	1.9e		1:48p	4:08p	1.5e		
	8:56p	11:52p	3.6 f		11:25p	8:17p	1.7e		9:36p	6:24p	1.9e		7:32p	11:08p	1.6 f		
Wed. 3/15	2:52a	6:01a	2.2e		5:34a	2:25a	2.2 f		9:35p	8:45p	1.5e		2:31p	4:51p	1.4e		
	9:40a	12:25p	3.2 f		11:54a	8:41a	1.6e		10:15a	6:52a	1.9e		8:05p	11:28p	1.5 f		
	3:33p	6:27p	1.8e		5:44p	2:42p	1.8 f		10:06p	7:02p	1.6e		2:46a	5:11a	1.5e		
Thu. 3/16	9:27p				11:54p	8:45p	1.5e		12:18a	1.8 f			8:32a	11:53a	1.5 f		
	3:29a	12:31a	3.3 f		6:03a	2:52a	2.1 f		4:21p	12:52p	1.6 f		3:17p	5:35p	1.3e		
	10:21a	6:34a	2.1e		12:39p	9:01a	1.6e		5:12p	1:36p	1.5 f		8:41p	11:56p	1.5 f		
Fri. 3/17	4:24p	1:11p	2.9 f		6:34p	3:29p	1.6 f		10:39p	7:43p	1.3e		9:23p				
	9:55p	7:10p	1.5e			9:22p	1.4e		10:39p	7:43p	1.3e		3:13a	5:44a	1.4e		
	4:04a	1:10a	3.0 f		12:24a	3:22a	2.0 f		4:20a	12:52a	1.8 f		9:03a	12:31p	1.4 f		
Sat. 3/18	10:59a	7:01a	1.9e		6:33a	9:25a	1.6e		5:12p	1:36p	1.5 f		4:07p	6:23p	1.1e		
	5:16p	1:58p	2.6 f		1:25p	4:18p	1.5 f		10:39p	7:43p	1.3e		9:23p				
	10:23p	7:55p	1.3e		7:30p	10:07p	1.1e		12:18a	1.8 f			3:42a	12:32a	1.4 f		
Fri. 3/19	4:37a	1:50a	2.6 f		12:57a	3:56a	2.0 f		4:49a	1:30a	1.6 f		9:37a	6:22a	1.4e		
	11:32a	7:25a	1.7e		7:05a	9:57a	1.6e		11:49a	8:01a	1.9e		6:03a	8:47a	1.0e		
	6:15p	2:48p	2.3 f		2:17p	5:16p	1.3 f		6:10p	2:25p	1.3 f		5:05p	1:16p	1.2 f		
Sat. 3/20	10:55p	8:46p	1.0e		8:34p	11:02p	0.9e		11:18p	8:30p	1.0e		10:13p	7:17p	0.9e		
	5:11a	2:31a	2.2 f		1:37a	4:36a	1.8 f		5:22a	2:13a	1.5 f		4:18a	1:16a	1.3 f		
	12:03p	7:54a	1.5e		7:42a	10:38a	1.6e		12:46p	8:43a	1.7e		10:17a	7:04a	1.3e		
Sun. 3/21	7:23p	3:40p	2.0 f		3:15p	6:34p	1.2 f		7:20p	3:21p	1.1 f		6:13p	2:10p	1.1 f		
	11:35p	9:40p	0.8e		9:49p				9:26p	0.7e			11:14p	8:20p	0.8e		
	5:50a	3:16a	1.8 f		2:25a	12:08a	0.7e		12:08a	3:03a	1.3 f		5:04a	2:08a	1.1 f		
Mon. 3/22	12:40p	8:34a	1.3e		8:26a	5:22a	1.6 f		6:05a	9:33a	1.6e		11:07a	7:52a	1.1e		
	8:33p	4:36p	1.9 f		4:20p	11:28a	1.5e		1:50p	4:32p	1.0 f		7:24p	3:24p	1.0 f		
	10:36p	0.7e			11:09p	8:05p	1.2 f		8:40p	10:38p	0.5e		9:32p	0.7e			
Tue. 3/23	12:27a	4:06a	1.5 f		3:26a	1:22a	0.6e		1:15a	4:00a	1.1 f		12:26a	3:07a	1.0 f		
	6:38a	9:28a	1.1e		9:21a	6:17a	1.4 f		7:00a	10:33a	1.5e		6:03a	8:47a	1.0e		
	1:34p	5:38p	1.8 f		5:27p	12:30p	1.5e		2:57p	6:51p	1.0 f		12:12p	5:17p	1.1 f		
Wed. 3/24	9:33p	11:34p	0.7e			9:15p	1.4 f		9:56p				8:30p	10:49p	0.8e		
	1:30a	5:03a	1.4 f		12:19a	2:34a	0.7e		2:34a	12:10a	0.5e		1:37a	4:10a	1.0 f		
	7:41a	10:40a	1.0e		4:36a	7:21a	1.3 f		8:09a	5:03a	1.0 f		7:13a	9:47a	1.0e		
Thu. 3/25	2:42p	6:38p	2.0 f		10:26a	1:42p	1.5e		3:57p	11:43a	1.5e		1:29p	6:33p	1.2 f		
	10:20p				6:27p	10:08p	1.6 f		10:56p	7:59p	1.2 f		9:26p	11:55p	0.9e		
	2:38a	12:27a	0.9e		1:14a	3:38a	0.8e		3:44a	1:25a	0.7e		2:40a	5:16a	1.0 f		
Fri. 3/26	8:50a	6:04a	1.4 f		5:47a	8:31a	1.3 f		9:21a	6:08a	1.0 f		8:22a	10:48a	1.0 e		
	3:45p	12:04p	1.1e		11:31a	2:59p	1.5e		4:50p	12:51p	1.7e		2:38p	7:21p	1.4 f		
	10:57p	7:26p	2.2 f		7:17p	10:50p	1.8 f		11:41p	8:44p	1.4 f		10:13p				
Sat. 3/27	3:42a	1:15a	1.1e		1:58a	4:33a	1.0e		4:44a	2:16a	0.9e		3:35a	12:43a	1.1e		
	9:54a	7:04a	1.7 f		6:51a	9:36a	1.5 f		10:25a	7:10a	1.2 f		9:23a	6:18a	1.2 f		
	4:39p	1:05p	1.3e		12:32p	4:02p	1.7e		5:34p	1:47p	1.8e		3:35p	11:48a	1.1e		
Fri. 3/28	11:29p	8:08p	2.5 f		8:00p	11:24p	2.0 f		9:15p	1:15p	1.5 f		10:55p	7:59p	1.5 f		
	4:41a	1:57a	1.4e		2:33a	5:21a	1.2e		12:18a	2:56a	1.2e		4:23a	1:20a	1.2 e		
	10:50a	7:58a	2.0 f		7:46a	10:32a	1.7 f		5:34a	8:07a	1.4 f		10:18a	7:13a	1.3 f		
Sat. 3/29	5:25p	1:52p	1.5e		1:26p	4:50p	1.8e		11:20a	2:33p	2.0e		4:23p	12:42p	1.3 e		
	11:59p	8:47p	2.8 f		8:37p	11:50p	2.0 f		6:14p	9:29p	1.7 f		11:33p	8:32p	1.6 f		
	5:34a	2:36a	1.6e		3:02a	6:02a	1.3e		12:50a	3:30a	1.4e		5:05a	1:53a	1.3e		
Sun. 3/30	11:40a	8:48a	2.4 f		8:35a	11:22a	1.9 f		6:20a	8:58a	1.6 f		11:09a	8:04a	1.4 f		
	6:08p	2:36p	1.7e		2:18p	5:32p	1.8e		12:11p	3:16p	2.1e		5:06p	1:32p	1.4 e		
	9:27p	3:1f	9:12p						6:50p	9:46p	1.8 f		9:02p	1.6 f			
Mon. 3/31	12:30a	3:13a	1.9e		3:28a	12:13a	2.1 f		1:19a	4:03a	1.7e		12:07a	2:25a	1.4e		
	6:24a	9:37a	2.8 f		9:22a	6:36a	1.5e		7:03a	9:45a	1.8 f		5:43a	8:53a	1.6 f		
	12:29p	3:21p	1.8e														

GOLDEN GATE
BENICIA BRIDGE
RICHMOND
OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT			
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	
Mon. 4/3	5:56a	3:31a	2.5 f	2:50a	12:34a	0.8e	12:45a	3:34a	1.4 f	5:49a	2:48a	1.2 f	12:17p	8:25a	1.4e				
	1:01p	8:45a	2.2e	8:48a	5:44a	1.8 f	6:52a	10:22a	2.0e	7:57p	5:08p	1.5 f							
	8:14p	4:32p	2.9 f	4:58p	12:13p	1.6e	2:33p	6:19p	1.5 f										
		10:51p	1.0e	11:27p	8:17p	1.8 f	9:21p	11:42p	0.9e										
Tue. 4/4	1:20a	4:34a	2.2 f	4:09a	1:55a	0.9e	2:09a	4:45a	1.3 f	1:08a	3:58a	1.2 f	7:07a	10:03a	1.8e				
	7:07a	10:03a	1.8e	10:05a	6:55a	1.5 f	8:09a	11:49a	2.0e	7:04a	9:31a	1.2e	2:17p	5:38p	2.9 f				
	2:17p	5:38p	2.9 f	6:05p	2:54p	1.6e	3:40p	7:29p	1.7 f	1:40p	6:16p	1.6 f	9:20p	12:00p	1.2e				
Wed. 4/5	2:55a	5:44a	2.1 f	12:30a	3:08a	1.1e	3:30a	1:03a	1.1e	2:19a	5:14a	1.2 f	8:29a	11:41a	1.7e				
	8:29a	11:41a	1.7e	5:31a	8:19a	1.5 f	9:27a	6:07a	1.3 f	8:18a	10:41a	1.2e	3:31p	6:43p	3.0 f				
	3:31p	6:43p	3.0 f	11:26a	4:06p	1.7e	4:38p	1:09p	2.0e	2:51p	7:11p	1.8 f	10:15p	12:58p	2.0 f				
Thu. 4/6	4:16a	1:00a	1.5e	1:22a	4:13a	1.3e	4:38a	2:04a	1.4e	3:22a	12:28a	1.3e	9:49a	6:55a	2.3 f				
	9:49a	6:55a	2.3 f	6:47a	9:40a	1.5 f	10:36a	7:33a	1.4 f	9:25a	6:27a	1.3 f	4:34p	12:58p	1.7 f				
	11:02p	7:40p	3.3 f	12:37p	5:01p	1.8e	5:27p	2:09p	2.1e	3:48p	11:51a	1.2e	11:40p	8:30p	3.5 f				
Fri. 4/7	5:22a	1:53a	1.8e	2:07a	5:10a	1.6e	12:01a	2:55a	1.7e	4:16a	1:16a	1.5e	10:59a	7:59a	2.6 f				
	10:59a	7:59a	2.6 f	7:52a	10:45a	1.7 f	5:37a	8:42a	1.6 f	10:24a	7:28a	1.5 f	5:29p	1:57p	1.7e				
	11:44p	8:30p	3.5 f	8:32p	11:42p	2.4 f	6:10p	9:49p	2.0 f	11:21p	8:41p	1.9 f	6:17p	2:49p	1.7e				
Sat. 4/8	6:20a	2:40a	2.1e	2:46a	6:01a	1.7e	12:39a	3:38a	1.9e	5:04a	8:21a	1.6 f	11:59a	8:56a	2.9 f				
	11:59a	8:56a	2.9 f	8:48a	11:38a	1.8 f	6:29a	9:33a	1.7 f	11:17a	8:21a	1.6 f	6:17p	9:16p	3.6 f				
	9:16p	9:09p	1.0e	2:31p	6:24p	1.7e	12:28p	3:38p	2.0e	5:17p	1:40p	1.3e	9:09p	6:47p	10:18p	2.0 f	11:59p	9:17p	1.8 f
Sun. 4/9	12:23a	3:26a	2.3e	3:20a	12:17a	2.4 f	1:14a	4:17a	2.1e	5:47a	2:33a	1.6e	7:12a	9:49a	3.1 f				
	12:54p	3:40p	1.7e	3:20p	12:26p	1.8 f	1:16p	4:16p	1.9e	5:52p	2:25p	1.3e	6:59p	9:59p	3.6 f				
Mon. 4/10	1:01a	4:11a	2.4e	3:51a	12:46a	2.3 f	1:44a	4:52a	2.1e	12:34a	3:03a	1.6e	8:00a	10:38a	3.2 f				
	1:46p	4:30p	1.6e	4:08p	1:11p	1.8 f	2:01p	4:51p	1.8e	12:52p	3:08p	1.3e	7:37p	10:40p	3.6 f				
Tue. 4/11	1:37a	4:51a	2.4e	4:18a	1:12a	2.2 f	2:12a	5:22a	2.2e	1:05a	3:31a	1.5e	8:44a	11:24a	3.2 f				
	2:37p	5:17p	1.5e	11:05a	7:50a	1.8e	8:39a	11:26a	1.7 f	7:01a	10:31a	1.6 f	8:10p	11:19p	3.4 f				
Wed. 4/12	2:11a	5:25a	2.4e	4:43a	1:36a	2.1 f	2:38a	5:49a	2.2e	1:33a	4:01a	1.5e	9:25a	12:08p	3.2 f				
	3:27p	6:01p	1.4e	5:44p	2:39p	1.7 f	3:31p	6:02p	1.4e	2:22p	4:33p	1.2e	8:40p	11:56p	3.1 f				
Thu. 4/13	2:43a	5:50a	2.3e	5:08a	2:04a	2.1 f	3:01a	6:16a	2.2e	1:58a	4:32a	1.5e	10:00a	12:51p	3.0 f				
	4:17p	6:45p	1.2e	6:36p	3:24p	1.6 f	4:18p	6:40p	1.2e	3:09p	5:17p	1.1e	9:09p	11:35p	9:02p	1.0e	8:15p	11:21p	1.4 f
Fri. 4/14	3:13a	12:33a	2.8 f	5:36a	2:37a	2.0 f	3:25a	12:14a	1.7 f	2:23a	5:05a	1.5e	10:28a	6:09a	2.2e				
	5:08p	1:34p	2.8 f	7:32p	4:10p	1.5 f	5:09p	1:17p	1.5 f	8:26a	12:15p	1.4 f	9:40p	7:30p	1.0e				
Sat. 4/15	3:43a	1:11a	2.4 f	12:12a	3:14a	1.9 f	3:52a	12:53a	1.6 f	2:53a	12:01a	1.3 f	10:50a	6:31a	2.0e				
	6:02p	2:18p	2.5 f	1:47p	5:00p	1.5 f	6:04p	2:01p	1.4 f	4:51p	12:56p	1.3 f	10:15p	8:19p	0.8e				
Sun. 4/16	4:14a	1:51a	2.0 f	12:56a	3:57a	1.8 f	4:25a	1:37a	1.4 f	3:30a	12:46a	1.2 f	7:02p	3:05p	2.3 f				
	11:11a	7:00a	1.8e	6:46a	9:53a	1.9e	12:03p	8:02a	2.0e	9:30a	6:25a	1.4e	10:58p	9:12p	0.7e				
Mon. 4/17	4:50a	2:35a	1.6 f	1:51a	4:45a	1.6 f	5:06a	2:27a	1.2 f	4:16a	1:38a	1.1 f	11:42a	7:38a	1.6e				
	8:05p	3:55p	2.1 f	3:26p	7:13p	1.5 f	8:12p	3:48p	1.2 f	10:15a	7:13a	1.3 e	11:51p	10:08p	0.7e				
Tue. 4/18	5:37a	3:26a	1.4 f	2:57a	12:57a	0.6e	12:40a	3:24a	1.0 f	11:56p	8:59p	0.8e	12:29p	8:29a	1.4e				
	9:00p	4:49p	2.1 f	4:23p	11:42a	1.7e	5:59a	9:44a	1.7e	11:12a	8:08a	1.2e	11:04p	11:04p	0.7e				
Wed. 4/19	12:58a	4:24a	1.2 f	4:11a	2:05a	0.7e	2:02a	4:27a	0.9 f	1:03a	3:36a	1.0 f	6:39a	9:41a	1.2e				
	1:31p	5:45p	2.2 f	5:19p	12:49p	1.6e	2:55p	6:05p	1.3 f	6:25a	9:09a	1.1 e	9:43p	11:59p	0.9e				
Thu. 4/20	2:14a	5:28a	1.3 f	12:34a	3:06a	0.9e	3:16a	12:39a	0.8e	2:04a	4:40a	1.0 f	7:59a	11:17a	1.1e				
	2:36p	6:38p	2.4 f	5:25a	7:56a	1.2 f	8:29a	5:33a	0.9 f	7:40a	10:12a	1.1 e	10:18p	6:11p	1.8 f				
Fri. 4/21	3:27a	12:47a	1.2e	1:12a	4:00a	1.1e	4:18a	1:33a	1.0e	8:49a	11:14a	1.2e	9:18a	6:34a	1.5 f				
	3:34p	12:34p	1.3e	11:57a	3:04p	1.6e	4:37p	12:58p	1.7e	2:39p	6:52p	1.5 f	10:48p	7:25p	2.7 f				
Sat. 4/22	4:31a	1:30a	1.6e	1:42a	4:46a	1.3e	5:12a	2:14a	1.4e	3:47a	12:30a	1.2e	10:25a	7:33a	1.9 f				
	4:25p	1:26p	1.4e	1:00p	4:00p	1.6e	5:20p	1:53p	1.8e	9:51a	6:43a	1.3 f	11:18p	8:08p	3.1 f				
Sun. 4/23	5:27a	2:08a	2.0e	2:08a	5:24a	1.5e	6:01a	2:52a	1.7e	4:31a	1:08a	1.4e	11:22a	8:27a	2.4 f				
	5:12p	2:11p	1.6e	1:59p	4:50p	1.6e	6:00p	2:43p	1.9e	4:22p	1:07p	1.4e	11:49p	8:50p	3.4 f				
Mon. 4/24	6:19a	2:42a	2.3e	2:33a	5:54a	1.8e	12:30a	3:28a	2.0e	5:14a	1:45a	1.6e	12:16p	9:18a	2.8 f				
	5:56p	2:55p	1.6e	2:56p	5:39p	1.5e	12:47p	3:31p	1.9e	5:08p	1:58p	1.4e	9:33p	3:36p	3.6 f				
Tue. 4/25	12:22a	3:16a	2.7e	2:59a	6:16a	2.0e	1:01a	4:07a	2.3e	5:55a	2:24a	1.7e	7:06a	10:07a	3.2 f				
	1:08p	3:43p	1.6e	3:53p	6:27p	1.4e	1:43p	4:19p	1.8e	5:54p	2:50p	1.4e	6:40p	10:16p	3.7 f				
	9:26p	9:26p					7:17p	10:11p	2.2 f	9:28p	1:17p	1.7 f							

**GOLDEN
GATE**
**BENICIA
BRIDGE**
RICHMOND
OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Wed. 4/26	12:57a	3:51a	3.0e	3:30a	12:28a	2.4 f	1:34a	4:47a	2.6e	12:34a	3:05a	1.9e	6:37a	10:22a	1.7 f			
	7:52a	10:56a	3.5 f	10:49a	6:43a	2.2e	8:23a	11:10a	2.0 f									
	2:00p	4:34p	1.5e	4:51p	1:40p	2.2 f	2:40p	5:09p	1.7e									
	7:23p	10:59p	3.8 f	10:04p	7:17p	1.3e	7:57p	10:52p	2.2 f									
Thu. 4/27	1:34a	4:28a	3.2e	4:06a	1:08a	2.5 f	2:10a	5:30a	2.8e									
	8:37a	11:43a	3.7 f	11:40a	7:18a	2.4e	9:13a	12:01p	2.0 f									
	2:53p	5:25p	1.4e	5:50p	2:34p	2.2 f	3:38p	5:59p	1.5e									
	8:08p	11:43p	3.7 f	10:45p	8:10p	1.2e	8:39p	11:36p	2.2 f									
Fri. 4/28	2:14a	5:07a	3.3e	4:47a	1:51a	2.5 f	2:49a	6:15a	2.9e									
	9:21a	12:31p	3.8 f	12:33p	7:59a	2.5e	10:04a	12:56p	2.0 f									
	3:47p	6:16p	1.3e	6:51p	3:31p	2.2 f	4:38p	6:52p	1.3e									
	8:54p			11:33p	9:06p	1.0e	9:26p											
Sat. 4/29	2:56a	12:28a	3.5 f	5:32a	2:39a	2.4 f	3:33a	12:23a	2.0 f									
	10:05a	5:47a	3.3e	1:28p	8:45a	2.4e	10:59a	7:03a	2.8e									
	4:43p	1:21p	3.7 f	7:55p	4:31p	2.1 f	5:41p	1:56p	1.9 f									
	9:44p	7:11p	1.2e	10:08p	0.9e		10:19p	7:49p	1.1e									
Sun. 4/30	3:42a	1:17a	3.1 f	12:28a	3:30a	2.2 f	4:23a	1:15a	1.8 f									
	10:51a	6:31a	3.0e	6:23a	9:38a	2.3e	11:57a	7:55a	2.6e									
	5:43p	2:14p	3.5 f	2:26p	5:36p	2.0 f	6:47p	3:08p	1.7 f									
	10:40p	8:17p	1.1e	9:00p	11:19p	0.9e	11:23p	8:52p	1.0e									
Mon. 5/1	4:33a	2:10a	2.7 f	1:32a	4:26a	1.9 f	5:21a	2:12a	1.6 f									
	11:41a	7:22a	2.6e	7:20a	10:41a	2.0e	12:58p	8:52a	2.4e									
	6:49p	3:10p	3.3 f	3:26p	6:44p	2.0 f	7:54p	4:35p	1.7 f									
	11:50p	9:28p	1.0e	10:07p				10:08p	0.9e									
Tue. 5/2	5:32a	3:10a	2.3 f	2:47a	12:34a	0.9e	12:41a	3:17a	1.3 f									
	12:41p	8:25a	2.1e	8:27a	5:29a	1.6 f	6:29a	9:59a	2.1e									
	7:57p	4:10p	3.1 f	4:26p	12:27p	1.7e	2:01p	5:52p	1.7 f									
	10:36p	1:11p	1.1e	11:10p	7:51p	2.1 f	8:58p	11:32p	1.0e									
Wed. 5/3	1:22a	4:15a	2.0 f	4:09a	1:48a	1.1e	2:04a	4:31a	1.2 f									
	6:46a	9:51a	1.7e	9:45a	6:44a	1.4 f	7:46a	11:18a	1.9e									
	1:49p	5:12p	3.1 f	5:25p	2:17p	1.6e	3:02p	6:54p	1.8 f									
	8:58p	11:43p	1.3e	8:51p	2.2 f		9:55p											
Thu. 5/4	2:57a	5:26a	1.9 f	12:06a	2:56a	1.3e	3:23a	12:45a	1.3e									
	8:14a	11:27a	1.5e	5:32a	8:13a	1.3 f	9:05a	5:59a	1.1 f									
	2:56p	6:14p	3.1 f	11:07a	3:25p	1.6e	3:56p	12:36p	1.8e									
	9:51p			6:18p	9:43p	2.4 f	10:43p	7:47p	1.9 f									
Fri. 5/5	4:13a	12:44a	1.6e	12:54a	3:59a	1.6e	4:31a	1:43a	1.6e									
	9:38a	6:41a	2.1 f	6:49a	9:38a	1.4 f	10:16a	7:31a	1.3 f									
	3:54p	12:39p	1.5e	12:22p	4:19p	1.6e	4:44p	1:38p	1.8e									
	10:36p	7:11p	3.3 f	7:05p	10:28p	2.4 f	11:25p	8:31p	1.9 f									
Sat. 5/6	5:17a	1:36a	2.0e	1:36a	4:55a	1.8e	5:29a	2:33a	1.9e									
	10:50a	7:48a	2.4 f	7:54a	10:42a	1.5 f	11:19a	8:38a	1.4 f									
	4:46p	1:34p	1.5e	1:26p	5:06p	1.5e	5:26p	2:28p	1.7e									
	11:16p	8:00p	3.4 f	7:45p	11:06p	2.4 f	9:06p	1:06p	1.9 f									
Sun. 5/7	6:13a	2:21a	2.2e	2:12a	5:46a	2.0e	12:02a	3:16a	2.1e									
	11:50a	8:45a	2.7 f	8:49a	11:36a	1.6 f	6:20a	9:31a	1.6 f									
	5:31p	2:22p	1.4e	2:23p	5:47p	1.3e	12:15p	3:12p	1.6e									
	11:53p	8:45p	3.5 f	8:21p	11:38p	2.4 f	6:04p	9:28p	1.9 f									
Mon. 5/8	7:02a	3:02a	2.4e	2:43a	6:29a	2.0e	12:35a	3:54a	2.3e									
	12:45p	9:36a	2.9 f	9:37a	12:25p	1.7 f	7:06a	10:17a	1.7 f									
	6:10p	3:10p	1.4e	3:17p	6:24p	1.2e	1:07p	3:52p	1.5e									
	9:27p	3:5 f		8:51p			6:40p	9:42p	1.8 f									
Tue. 5/9	12:28a	3:41a	2.4e	3:09a	12:03a	2.2 f	1:04a	4:27a	2.3e									
	7:47a	10:24a	3.0 f	10:21a	7:05a	2.0e	7:48a	10:57a	1.7 f									
	1:36p	3:58p	1.3e	4:09p	1:12p	1.7 f	1:56p	4:30p	1.4e									
	6:46p	10:07p	3.3 f	9:19p	6:58p	1.0e	7:14p	10:03p	1.8 f									
Wed. 5/10	1:01a	4:16a	2.5e	3:33a	12:27a	2.1 f	1:31a	4:55a	2.3e									
	8:28a	11:08a	3.1 f	11:01a	7:28a	2.0e	8:27a	11:32a	1.7 f									
	2:27p	4:47p	1.2e	5:01p	1:57p	1.7 f	2:44p	5:08p	1.2e									
	7:19p	10:45p	3.1 f	9:48p	7:32p	0.8e	7:47p	10:33p	1.7 f									
Thu. 5/11	1:32a	4:45a	2.4e	3:57a	12:54a	2.1 f	1:55a	5:20a	2.3e									
	9:05a	11:49a	3.1 f	11:38a	7:25a	2.0e	9:04a	12:02p	1.6 f									
	3:17p	5:34p	1.1e	5:52p	2:40p	1.7 f	3:31p	5:46p	1.1e									
	7:51p	11:23p	2.9 f	10:19p	8:09p	0.7e	8:20p	11:06p	1.7 f									
Fri. 5/12	2:02a	5:07a	2.4e	4:24a	1:25a	2.0 f	2:19a	5:47a	2.3e									
	9:36a	12:28p	3.0 f	12:13p	7:36a	2.1e	9:40a	12:31p	1.6 f									
	4:05p	6:18p	1.0e	6:44p	3:23p	1.7 f	4:18p	6:25p	0.9e									
	8:25p	12:00p	2.6 f	10:55p	8:51p	0.7e	8:54p	11:44p	1.6 f									
Sat. 5/13	2:31a	5:28a	2.3e	4:54a	2:02a	2.0 f	2:44a	6:17a	2.3e									
	10:00a	1:08p	2.9 f	12:48p	8:05a	2.2e	10:15a	1:04p	1.6 f									
	4:52p	7:03p	0.9e	7:35p	4:03p	1.7 f	5:06p	7:05p	0.8e									
	9:01p			11:38p	9:37p	0.6e	9:30p											
Sun. 5/14	3:02a	12:38a	2.3 f	5:29a	2:43a	1.9 f	3:13a	12:24a	1.5 f									
	10:19a	5:55a	2.2e	1:23p	8:42a	2.2e	10:51a	6:52a	2.3e									
	5:39p	1:48p	2.7 f	8:27p	4:44p	1.7 f	5:55p	1:41p	1.5 f									
	9:41p	7:50p	0.8e		10:29p	0.6e	10:12p	7:49p	0.7e			</						

GOLDEN GATE

BENICIA BRIDGE

RICHMOND

OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Fri. 5/19	1:43a	4:55a	1.3 f	4:57a	2:26a	0.9e	2:43a	4:59a	1.0 f	1:19a	4:03a	1.0 f						
	7:19a	10:38a	1.3e	10:06a	7:23a	1.1 f	7:44a	11:11a	1.7e	7:01a	9:40a	1.2e						
	1:53p	5:52p	2.7 f	5:07p	1:17p	1.6e	2:49p	5:49p	1.6 f	12:45p	4:54p	1.4 f						
	9:31p			8:35p	1:19 f		9:56p			8:35p	10:53p	1.1e						
Sat. 5/20	3:03a	12:14a	1.3e	12:17a	3:18a	1.2e	3:49a	12:40a	1.2e	2:15a	5:08a	1.1 f						
	8:45a	6:03a	1.5 f	6:07a	8:39a	1.2 f	9:08a	6:06a	1.1 f	8:15a	10:43a	1.2e						
	2:46p	11:59a	1.3e	11:24a	2:20p	1.5e	3:39p	12:15p	1.7e	1:48p	5:46p	1.5 f						
	10:04p	6:43p	3.0 f	5:53p	9:15p	2.0 f	10:34p	6:38p	1.7 f	9:17p	11:40p	1.3e						
Sun. 5/21	4:14a	12:58a	1.8e	12:46a	4:02a	1.4e	4:48a	1:29a	1.6e	3:08a	6:13a	1.2 f						
	10:00a	7:08a	1.9 f	7:11a	9:50a	1.4 f	10:25a	7:12a	1.2 f	9:25a	11:44a	1.2e						
	3:36p	12:57p	1.4e	12:36p	3:18p	1.4e	4:26p	1:16p	1.6e	2:46p	6:34p	1.6 f						
Mon. 5/22	5:14a	1:37a	2.2e	1:14a	4:37a	1.7e	5:42a	2:14a	2.0e	3:58a	12:24a	1.5e						
	11:05a	8:06a	2.3 f	8:08a	10:52a	1.6 f	11:35a	8:17a	1.5 f	10:29a	7:18a	1.3 f						
	4:23p	1:45p	1.4e	1:42p	4:13p	1.3e	5:10p	2:12p	1.6e	3:41p	12:43p	1.2e						
	11:11p	8:16p	3.5 f	7:17p	10:31p	2.3 f	11:44p	8:09p	2.0 f	10:38p	7:21p	1.6 f						
Tue. 5/23	6:07a	2:11a	2.6e	1:43a	5:06a	2.0e	6:34a	2:57a	2.3e	4:47a	1:08a	1.7e						
	12:03p	8:59a	2.8 f	9:02a	11:48a	1.8 f	12:39p	9:17a	1.7 f	11:31a	8:23a	1.5 f						
	5:11p	2:30p	1.4e	2:45p	5:07p	1.2e	5:54p	3:06p	1.5e	4:35p	1:39p	1.3e						
	11:48p	9:01p	3.7 f	7:57p	11:11p	2.5 f	8:54p	2:1 f		11:19p	8:08p	1.7 f						
Wed. 5/24	6:56a	2:45a	2.9e	2:16a	5:36a	2.2e	12:20a	3:40a	2.6e	5:35a	1:52a	1.8e						
	12:58p	9:50a	3.2 f	9:53a	12:43p	2.0 f	7:25a	10:15a	1.8 f	12:30p	9:28a	1.6 f						
	6:00p	3:19p	1.3e	3:48p	6:03p	1.0e	1:40p	4:00p	1.4e	5:29p	2:35p	1.2e						
	9:47p	3:8 f	8:38p	11:53p	2.5 f	6:39p	9:39p	2.2 f	12:00p	8:57p	1.7 f							
Thu. 5/25	12:26a	3:21a	3.2e	2:54a	6:13a	2.4e	12:59a	4:25a	2.9e	6:23a	2:37a	2.0e						
	7:43a	10:40a	3.5 f	10:44a	1:37p	2.1 f	8:15a	11:11a	2.0 f	1:28p	10:28a	1.7 f						
	1:52p	4:14p	1.3e	4:50p	7:00p	0.9e	2:41p	4:54p	1.3e	6:25p	3:31p	1.2e						
	6:51p	10:33p	3.7 f	9:24p			7:26p	10:26p	2.2 f	9:47p	1.6 f							
Fri. 5/26	1:07a	4:02a	3.3e	3:36a	12:39a	2.6 f	1:41a	5:11a	3.0e	12:44a	3:23a	2.0e						
	8:28a	11:28a	3.8 f	11:35a	6:56a	2.6e	9:05a	12:06p	2.0 f	7:11a	11:24a	1.8 f						
	2:45p	5:12p	1.2e	5:51p	2:32p	2.2 f	3:40p	5:49p	1.2e	2:25p	4:28p	1.2e						
	7:42p	11:20p	3.6 f	10:15p	8:00p	0.9e	8:15p	11:14p	2.1 f	7:23p	10:37p	1.6 f						
Sat. 5/27	1:50a	4:45a	3.3e	4:22a	1:27a	2.5 f	2:25a	5:59a	3.0e	1:30a	4:11a	2.0e						
	9:13a	12:15p	3.9 f	12:26p	7:44a	2.6e	9:55a	1:02p	2.0 f	8:00a	12:18p	1.8 f						
	3:39p	6:07p	1.2e	6:50p	3:27p	2.2 f	4:38p	6:44p	1.1e	3:22p	5:25p	1.2e						
	8:36p			11:13p	9:01p	0.9e	9:08p			8:23p	11:28p	1.5 f						
Sun. 5/28	2:36a	12:08a	3.4 f	5:13a	2:19a	2.4 f	3:14a	12:04a	2.0 f	2:18a	5:00a	1.9e						
	9:57a	5:31a	3.2e	1:16p	8:36a	2.5e	10:46a	6:48a	2.9e	8:50a	1:12p	1.8 f						
	4:32p	1:04p	3.8 f	7:48p	4:23p	2.3 f	5:35p	2:02p	2.0 f	4:17p	6:24p	1.1e						
	9:32p	7:03p	1.2e		10:05p	0.9e	10:08p	7:42p	1.1e	9:23p								
Mon. 5/29	3:25a	12:58a	3.1 f	12:16a	3:13a	2.1 f	4:06a	12:58a	1.8 f	3:11a	12:20a	1.4 f						
	10:42a	6:19a	2.9e	6:06a	9:34a	2.3e	11:38a	7:39a	2.7e	9:42a	5:51a	1.8e						
	5:27p	1:55p	3.7 f	2:07p	5:19p	2.3 f	6:32p	3:04p	1.9 f	5:12p	2:08p	1.8 f						
	10:33p	8:05p	1.1e	8:46p	11:12p	1.0e	11:15p	8:43p	1.1e	10:25p	7:25p	1.1e						
Tue. 5/30	4:19a	1:53a	2.7 f	1:25a	4:11a	1.9 f	5:04a	1:56a	1.6 f	4:08a	1:15a	1.3 f						
	11:30a	7:12a	2.5e	7:04a	10:43a	2.1e	12:31p	8:33a	2.4e	10:37a	6:45a	1.6e						
	6:26p	2:49p	3.5 f	2:58p	6:16p	2.3 f	7:28p	4:07p	1.9 f	6:07p	3:03p	1.8 f						
	11:45p	9:09p	1.1e	9:44p				9:51p	1.1e	11:27p	8:28p	1.2e						
Wed. 5/31	5:19a	2:52a	2.3 f	2:39a	12:20a	1.1e	12:30a	3:00a	1.3 f	5:12a	2:14a	1.3 f						
	12:23p	8:21a	2.1e	8:09a	5:15a	1.5 f	6:09a	9:33a	2.1e	11:33a	7:45a	1.4e						
	7:28p	3:45p	3.3 f	3:49p	12:09p	1.8e	1:24p	5:08p	1.8 f	7:00p	3:58p	1.7 f						
	10:14p	1:2e	10:40p	7:14p	2.3 f	8:22p	11:05p	1.2e		9:29p	1.2e							
Thu. 6/1	1:16a	3:56a	2.0 f	3:59a	1:28a	1.2e	1:49a	4:12a	1.1 f	12:31a	3:17a	1.2 f						
	6:32a	9:48a	1.7e	9:22a	6:29a	1.3 f	7:21a	10:40a	1.8 e	6:22a	8:48a	1.3e						
	1:19p	4:42p	3.2 f	4:39p	1:28p	1.6e	2:17p	6:04p	1.8 f	12:31p	4:53p	1.7 f						
	8:28p	11:18p	1.4e	11:33p	8:10p	2.3 f	9:14p			7:51p	10:27p	1.3e						
Fri. 6/2	2:45a	5:07a	1.8 f	5:22a	2:35a	1.4e	3:05a	12:15a	1.5e	1:33a	4:27a	1.2 f						
	7:59a	11:06a	1.4e	10:42a	8:01a	1.1 f	8:37a	5:38a	1.1 f	7:33a	9:54a	1.1e						
	2:16p	5:41p	3.1 f	5:27p	2:33p	1.5e	3:08p	11:52a	1.6e	1:27p	5:42p	1.6 f						
	9:20p				9:01p	2.4 f	10:01p	6:54p	1.8 f	8:38p	11:21p	1.3e						
Sat. 6/3	4:00a	12:20a	1.6e	12:19a	3:37a	1.7e	4:13a	1:14a	1.7e	2:32a	5:44a	1.2 f						
	9:23a	6:23a	1.9 f	6:41a	9:27a	1.2 f	9:51a	7:13a	1.1 f	8:41a	11:02a	1.1e						
	3:09p	12:11p	1.3e	11:59a	3:30p	1.3e	3:55p	12:58p	1.5e	2:19p	6:24p	1.6 f						
	10:05p	6:37p	3.2 f	6:12p	9:46p	2.4 f	10:43p	7:35p	1.8 f	9:22p								
Sun. 6/4	5:03a	1:13a	1.9e	12:59a	4:35a	1.9e	5:13a	2:05a	2.0e	3:26a	12:07a	1.4e						
	10:36a	7:33a	2.1 f	7:48a	10:33a	1.4 f	11:00a	8:24a	1.3 f	9:45a	6:55a	1.3 f						
	3:55p	1:06p	1.3e	1:10p	4:21p	1.2e	4:39p	1:54p	1.4e	3:08p	12:04p	1.1e						
	10:45p	7:27p	3.2 f	6:53p	10:23p	2.3 f	11:21p	8:06p	1.8 f	10:02p	6:57p	1.5 f						
Mon. 6/5	5:58a	1:56a	2.1e	1:33a	5:27a	2.0e	6:06a	2:50										

GOLDEN GATE
BENICIA BRIDGE
RICHMOND
OAKLAND

	SLACK	CURRENT	SLACK	CURRENT	SLACK	CURRENT	SLACK	CURRENT	
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Sun. 6/11	2:00a	4:59a	2.3e	4:26a	1:37a	2.0 f	2:17a	5:54a	2.4e
	9:34a	12:40p	2.9 f	12:28p	7:44a	2.3e	9:55a	12:53p	1.6 f
	4:22p	6:33p	0.9e	7:26p	3:47p	1.8 f	4:53p	6:50p	0.8e
	8:31p			11:18p	9:27p	0.6e	9:11p		
Mon. 6/12	2:35a	12:10a	2.4 f	5:05a	2:20a	1.9 f	2:50a	12:02a	1.5 f
	9:57a	5:32a	2.3e	12:59p	8:23a	2.3e	10:27a	6:30a	2.4e
	5:02p	1:18p	2.9 f	8:06p	4:16p	1.9 f	5:33p	1:21p	1.6 f
	9:13p	7:16p	0.8e		10:12p	0.6e	9:54p	7:29p	0.8e
Tue. 6/13	3:12a	12:51a	2.2 f	12:10a	3:06a	1.8 f	3:27a	12:47a	1.4 f
	10:24a	6:08a	2.2e	5:46a	9:06a	2.3e	11:02a	7:10a	2.4e
	5:42p	1:58p	2.8 f	1:32p	4:46p	1.9 f	6:13p	1:57p	1.7 f
	9:58p	8:02p	0.8e	8:46p	10:59p	0.7e	10:43p	8:11p	0.8e
Wed. 6/14	3:54a	1:35a	2.0 f	1:06a	3:55a	1.6 f	4:10a	1:35a	1.3 f
	10:59a	6:50a	2.1e	6:32a	9:54a	2.3e	11:39a	7:53a	2.3e
	6:24p	2:42p	2.8 f	2:08p	5:19p	2.0 f	6:53p	2:37p	1.7 f
	10:50p	8:51p	0.8e	9:25p	11:48p	0.7e	11:42p	8:58p	0.8e
Thu. 6/15	4:42a	2:25a	1.8 f	2:07a	4:48a	1.5 f	5:00a	2:28a	1.2 f
	11:40a	7:40a	1.9e	7:24a	10:46a	2.1e	12:21p	8:42a	2.1e
	7:09p	3:29p	2.8 f	2:47p	5:58p	2.0 f	7:35p	3:23p	1.7 f
	11:53p	9:44p	0.9e	10:04p				9:50p	0.9e
Fri. 6/16	5:40a	3:23a	1.6 f	3:14a	12:39a	0.9e	12:53a	3:26a	1.1 f
	12:26p	8:46a	1.6e	8:24a	5:46a	1.3 f	6:01a	9:36a	1.9e
	7:53p	4:18p	2.8 f	3:29p	11:43a	1.9e	1:07p	4:11p	1.8 f
		10:38p	1.2e	10:40p	6:41p	2.0 f	8:17p	10:49p	1.1e
Sat. 6/17	1:08a	4:26a	1.6 f	4:28a	1:31a	1.0e	2:09a	4:29a	1.0 f
	6:53a	10:07a	1.4e	9:37a	6:54a	1.1 f	7:15a	10:36a	1.7e
	1:16p	5:09p	2.9 f	4:12p	12:43p	1.6e	1:57p	5:01p	1.8 f
	8:35p	11:31p	1.5e	11:15p	7:28p	2.1 f	9:00p	11:49p	1.4e
Sun. 6/18	2:31a	5:34a	1.7 f	5:43a	2:20a	1.3e	3:21a	5:37a	1.1 f
	8:19a	11:26a	1.3e	10:59a	8:13a	1.1 f	8:42a	11:40a	1.5e
	2:07p	6:02p	3.1 f	4:56p	1:45p	1.4e	2:48p	5:52p	1.9 f
	9:15p			11:50p	8:16p	2.2 f	9:42p		
Mon. 6/19	3:47a	12:19a	1.9e	6:54a	3:05a	1.5e	4:27a	12:47a	1.8e
	9:40a	6:42a	2.0 f	12:17p	9:34a	1.3 f	10:08a	6:49a	1.2 f
	2:57p	12:29p	1.3e	5:40p	2:45p	1.2e	3:38p	12:45p	1.4e
	9:55p	6:54p	3.3 f		9:04p	2.3 f	10:24p	6:43p	2.0 f
Tue. 6/20	4:53a	1:01a	2.3e	12:26a	3:46a	1.8e	5:26a	1:40a	2.2e
	10:49a	7:44a	2.4 f	7:57a	10:44a	1.5 f	11:25a	8:05a	1.3 f
	3:47p	1:22p	1.3e	1:30p	3:45p	1.0e	4:29p	1:48p	1.3e
	10:36p	7:44p	3.4 f	6:26p	9:51p	2.4 f	11:06p	7:34p	2.1 f
Wed. 6/21	5:50a	1:39a	2.7e	1:04a	4:26a	2.1e	6:22a	2:30a	2.5e
	11:50a	8:39a	2.8 f	8:54a	11:43a	1.7 f	12:35p	9:19a	1.6 f
	4:39p	2:11p	1.2e	2:38p	4:44p	0.9e	5:19p	2:48p	1.2e
	11:18p	8:33p	3.6 f	7:13p	10:39p	2.5 f	11:50p	8:24p	2.1 f
Thu. 6/22	6:41a	2:17a	3.0e	1:45a	5:09a	2.3e	7:15a	3:19a	2.8e
	12:45p	9:32a	3.2 f	9:47a	12:38p	1.9 f	1:38p	10:23a	1.8 f
	5:35p	3:02p	1.2e	3:42p	5:46p	0.8e	6:11p	3:46p	1.1e
	9:23p	3:6 f		8:05p	11:28p	2.5 f	9:15p	2.1 f	
Fri. 6/23	12:02a	2:58a	3.1e	2:29a	5:57a	2.4e	12:35a	4:08a	3.0e
	7:30a	10:22a	3.5 f	10:37a	1:31p	2.1 f	8:06a	11:20a	1.9 f
	1:38p	3:59p	1.2e	4:43p	6:50p	0.8e	2:37p	4:44p	1.1e
	6:34p	10:13p	3.6 f	9:01p			7:05p	10:06p	2.1 f
Sat. 6/24	12:48a	3:44a	3.1e	3:17a	12:18a	2.5 f	1:22a	4:56a	3.0e
	8:17a	11:11a	3.7 f	11:25a	6:50a	2.5e	8:54a	12:13p	2.0 f
	2:29p	4:59p	1.2e	5:41p	2:22p	2.2 f	3:32p	5:40p	1.1e
	7:32p	11:03p	3.6 f	10:00p	7:52p	0.8e	8:01p	10:57p	2.1 f
Sun. 6/25	1:36a	4:35a	3.1e	4:08a	1:10a	2.4 f	2:11a	5:45a	3.0e
	9:03a	11:58a	3.9 f	12:11p	7:45a	2.5e	9:41a	1:02p	2.0 f
	3:20p	5:55p	1.3e	6:34p	3:13p	2.3 f	4:24p	6:34p	1.1e
	8:31p	11:53p	3.4 f	11:03p	8:53p	0.9e	8:58p	11:49p	2.0 f
Mon. 6/26	2:26a	5:28a	2.9e	5:00a	2:04a	2.3 f	3:02a	6:33a	2.9e
	9:48a	12:45p	3.8 f	12:56p	8:41a	2.4e	10:27a	1:49p	2.0 f
	4:10p	6:49p	1.3e	7:26p	4:02p	2.4 f	5:14p	7:28p	1.2e
	9:29p			9:53p	1:0e		9:58p		
Tue. 6/27	3:18a	12:44a	3.2 f	12:07a	2:59a	2.1 f	3:54a	12:43a	1.8 f
	10:31a	6:21a	2.7e	5:54a	9:36a	2.3e	11:12a	7:21a	2.7e
	5:01p	1:34p	3.7 f	1:40p	4:51p	2.4 f	6:02p	2:35p	2.0 f
	10:30p	7:45p	1.3e	8:17p	10:53p	1.1e	11:01p	8:23p	1.2e
Wed. 6/28	4:13a	1:37a	2.8 f	1:14a	3:57a	1.8 f	4:49a	1:39a	1.6 f
	11:15a	7:19a	2.4e	6:50a	10:33a	2.1e	11:57a	8:10a	2.4e
	5:53p	2:24p	3.5 f	2:23p	5:39p	2.4 f	6:49p	3:19p	1.9 f
	11:37p	8:43p	1.3e	9:08p	11:55p	1.2e	9:21p	1:3e	
Thu. 6/29	5:12a	2:35a	2.4 f	2:24a	4:58a	1.5 f	12:10a	2:39a	1.3 f
	11:59a	8:26a	2.0e	7:50a	11:34a	1.9e	5:48a	9:03a	2.1e
	6:49p	3:16p	3.3 f	3:07p	6:28p	2.4 f	12:43p	4:03p	1.8 f
	9:43p	1:4e		9:59p			7:37p	10:25p	1.4e
Fri. 6/30	12:58a	3:37a	2.0 f	3:40a	12:59a	1.3e	1:23a	3:46a	1.1 f
	6:22a	9:35a	1.6e	8:58a	6:10a	1.2 f	6:54a	10:00a	1.7e
	12:45p	4:09p	3.1 f	3:50p	12:37p	1.6e	1:30p	4:47p	1.8 f
	7:46p	10:43p	1.4e	10:48p	7:18p	2.3 f	8:25p	11:32p	1.5e
Sat. 7/1	2:21a	4:45a	1.8 f	5:01a	2:04a	1.4e	2:37a	5:06a	1.0 f
	7:43a	10:40a	1.4e	10:15a	7:41a	1.0 f	8:07a	11:05a	1.4e
	1:32p	5:03p	3.0 f	4:34p	1:40p	1.4e	2:18p	5:31p	1.7 f
	8:39p	11:44p	1.5e	11:33p	8:07p	2.2 f	9:12p		
Sun. 7/2	3:36a	6:01a	1.8 f	6:22a	3:08a	1.6e	3:46a	12:36a	1.7e
	9:06a	11:41a	1.2e	11:36a	9:09a	1.1 f	9:25a	6:46a	1.0 f
	2:20p	5:58p	2.9 f	5:18p	2:41p	1.1e	3:06p	12:15p	1.2e
	9:27p			8:53p	2.1 f		9:56p	6:15p	1.7 f
Mon. 7/3	4:39a	12:38a	1.7e	12:14a	4:08a	1.8e	4:49a	1:31a	1.9e
	10:19a	7:14a	2.0 f	7:32a	10:19a	1.3 f	10:40a	8:05a	1.2 f
	3:05p	12:36p	1.1e	12:54p	3:40p	0.9e	3:55p	1:21p	1.1e
	10:10p	6:50p	2.8 f	6:01p	9:33p	2.1 f	10:37p	6:58p	1.6 f

GOLDEN GATE
BENICIA BRIDGE
RICHMOND
OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT					
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots			
Tue. 7/4	5:34a	1:23a	1.8e	12:50a	5:03a	1.9e	5:44a	2:19a	2.1e	3:45a	7:42a	1.3f	10:25a	12:40p	0.9e						
	11:20a	8:12a	2.2 f	8:29a	11:16a	1.5 f	11:48a	9:07a	1.4 f	3:22p	6:35p	1.4 f									
	3:49p	1:26p	1.0e	2:05p	4:35p	0.8e	4:42p	2:19p	1.0e												
	10:48p	7:38p	2.8 f	6:43p	10:09p	2.0 f	11:15p	7:39p	1.6 f	9:58p			4:34a	12:34a	1.4e						
Wed. 7/5	6:20a	2:00a	1.9e	1:22a	5:50a	2.0e	6:32a	3:00a	2.2e	11:21a	8:38a	1.5 f	12:12p	1:35p	0.9e						
	12:12p	9:00a	2.4 f	9:16a	12:07p	1.7 f	12:48p	9:59a	1.5 f	4:15p	1:35p	0.9e									
	4:33p	2:12p	1.0e	3:09p	5:27p	0.7e	5:28p	3:10p	0.9e	10:36p	7:18p	1.3 f									
Thu. 7/6	11:23p	8:22p	2.7 f	7:24p	10:43p	2.0 f	11:51p	8:20p	1.6 f	5:17a	1:10a	1.4e	12:14p	9:28a	1.5 f						
	7:01a	2:32a	2.0e	1:53a	6:29a	2.1e	7:15a	3:35a	2.3e	5:06p	2:25p	0.9e									
	12:59p	9:43a	2.6 f	9:57a	12:53p	1.8 f	1:41p	10:46a	1.6 f	11:49p	8:48p	1.2 f									
	5:18p	2:58p	0.9e	4:07p	6:17p	0.6e	6:12p	3:57p	0.9e	11:13p	8:03p	1.3 f									
Fri. 7/7	11:57p	9:04p	2.6 f	8:05p	11:18p	2.0 f	9:00p	1:16p	1.6 f	5:55a	1:46a	1.4e	1:02p	10:13a	1.6 f						
	7:38a	3:03a	2.0e	2:24a	6:57a	2.1e	12:24a	4:04a	2.3e	5:56p	3:12p	0.9e									
	1:43p	10:22a	2.7 f	10:33a	1:36p	1.8 f	7:53a	11:27a	1.7 f	8:03p	10:59p	1.3 f									
	6:02p	3:46p	0.9e	4:58p	7:03p	0.6e	2:28p	4:40p	0.8e	11:49p	8:48p	1.2 f									
Sat. 7/8	9:46p	2.6 f	8:48p	11:56p	2.0 f	6:55p	9:40p	1.6 f	6:28a	2:24a	1.5e										
	12:30a	3:33a	2.0e	2:56a	6:59a	2.1e	12:57a	4:31a	2.3e	8:28a	12:02p	1.7 f	1:46p	10:51a	1.6 f						
	8:11a	10:59a	2.8 f	11:05a	2:14p	1.9 f	3:10p	5:19p	0.8e	6:42p	3:54p	0.9e									
	2:24p	4:34p	0.9e	5:41p	7:47p	0.6e	7:36p	10:21p	1.6 f	9:33p	1:2f										
Sun. 7/9	6:45p	10:27p	2.6 f	9:33p			2:02a	5:33a	2.4e	12:26a	3:04a	1.5e									
	1:04a	4:06a	2.1e	3:32a	12:36a	2.0 f	9:01a	12:22p	1.6 f	6:58a	11:22a	1.6 f									
	8:40a	11:34a	2.9 f	11:34a	7:03a	2.2e	3:49p	5:54p	0.8e	2:26p	4:30p	0.9e									
	3:02p	5:19p	1.0e	6:19p	2:48p	1.9 f	8:16p	11:02p	1.6 f	7:24p	10:16p	1.3 f									
Mon. 7/10	7:28p	11:07p	2.6 f	10:19p	8:29p	0.6e	8:56p	11:44p	1.5 f	8:03p	10:59p	1.3 f									
	1:40a	4:43a	2.2e	4:10a	11:18a	2.0 f	9:31a	12:30p	1.6 f	7:26a	11:45a	1.6 f									
	9:06a	12:09p	3.0 f	12:02p	7:33a	2.3e	4:24p	6:28p	0.9e	3:03p	5:04p	0.9e									
	3:38p	6:00p	1.0e	6:53p	3:14p	1.9 f	8:56p	11:44p	1.5 f	8:03p	10:59p	1.3 f									
Tue. 7/11	8:10p	11:48p	2.6 f	11:07p	9:08p	0.7e	2:38a	6:10a	2.5e	1:42a	4:28a	1.6e									
	2:18a	5:20a	2.3e	4:50a	2:03a	1.9 f	10:01a	12:52p	1.7 f	7:55a	12:07p	1.6 f									
	9:33a	12:46p	3.0 f	12:31p	8:10a	2.3e	4:57p	7:03p	0.9e	3:37p	5:38p	1.0e									
	4:12p	6:38p	1.1e	7:24p	3:37p	2.0 f	9:38p			8:40p	11:41p	1.3 f									
Wed. 7/12	8:53p			11:56p	9:44p	0.8e	3:17a	12:28a	1.5 f	2:23a	5:13a	1.7e									
	2:59a	12:29a	2.5 f	5:33a	2:49a	1.9 f	10:32a	6:49a	2.4e	8:29a	12:34p	1.6 f									
	10:03a	5:59a	2.3e	1:01p	8:52a	2.4e	5:29p	1:25p	1.8 f	4:10p	6:15p	1.0e									
	4:46p	1:25p	3.0 f	7:54p	4:03p	2.1 f	10:25p	7:41p	1.0e	9:17p											
Thu. 7/13	9:39p	7:15p	1.1e	10:19p	8:08p	0.8e	4:00a	1:14a	1.5 f	3:09a	12:24a	1.3 f									
	3:43a	1:14a	2.4 f	12:48a	3:37a	1.7 f	11:06a	7:32a	2.4e	9:08a	6:01a	1.6e									
	10:36a	6:40a	2.2e	6:20a	9:37a	2.3e	11:20p	8:23p	1.2e	4:44p	1:07p	1.6 f									
	5:22p	2:07p	3.0 f	1:34p	4:34p	2.1 f	11:20p	8:23p	1.2e	9:58p	6:57p	1.1e									
Fri. 7/14	10:29p	7:55p	1.2e	8:25p	10:55p	0.9e	11:20p	8:23p	1.2e	3:59a	1:10a	1.2 f									
	4:32a	2:04a	2.2 f	1:44a	4:28a	1.6 f	4:50a	2:05a	1.4 f	11:44a	8:19a	2.2e									
	11:13a	7:28a	2.0e	7:11a	10:25a	2.1e	11:44a	8:19a	2.2e	9:52a	6:52a	1.5e									
	6:02p	2:52p	3.0 f	2:08p	5:11p	2.2 f	6:40p	2:45p	1.9 f	5:22p	1:46p	1.6 f									
Sat. 7/15	11:27p	8:43p	1.3e	8:57p	11:35p	1.1e	9:11p	1:3e		10:47p	7:42p	1.2e									
	5:28a	3:00a	2.1 f	2:49a	5:25a	1.4 f	12:26a	3:02a	1.2 f	4:59a	2:01a	1.2 f									
	11:55a	8:28a	1.7e	8:10a	11:19a	1.8e	5:50a	9:10a	1.9e	10:42a	7:48a	1.4e									
	6:47p	3:40p	3.0 f	2:46p	5:53p	2.2 f	12:27p	3:32p	1.9 f	6:05p	2:32p	1.6 f									
Sun. 7/16	9:36p	1:56p	1.5e	9:34p			7:21p	10:06p	1.2e	11:44p	8:31p	1.3e									
	12:36a	4:01a	1.9 f	4:02a	12:20a	1.2e	1:41a	4:05a	1.1 f	6:12a	3:00a	1.1 f									
	6:38a	9:42a	1.4e	9:23a	6:33a	1.2 f	7:04a	10:09a	1.6 e	11:38a	8:49a	1.2e									
	12:41p	4:30p	3.0 f	3:26p	12:17p	1.5e	1:14p	4:23p	1.9 f	6:53p	3:23p	1.6 f									
Mon. 7/17	7:35p	10:31p	1.7e	10:14p	6:40p	2.2 f	8:06p	11:07p	1.7 e	9:23p											
	1:54a	5:07a	1.9 f	5:22a	1:12a	1.4e	2:57a	5:16a	1.1 f	12:49a	4:10a	1.1 f									
	8:03a	10:58a	1.2e	10:46a	7:57a	1.1 f	8:34a	11:14a	1.3e	7:36a	9:54a	1.1e									
	1:33p	5:24p	3.0 f	4:10p	1:19p	1.2e	2:07p	5:16p	1.9 f	12:41p	4:18p	1.6 f									

GOLDEN GATE
BENICIA BRIDGE
RICHMOND
OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Thu. 7/27	4:11a	1:23a	3.0 f	12:59a	3:42a	1.8 f	4:34a	1:19a	1.6 f	3:36a	12:34a	1.4 f	9:44a	6:06a	1.6e	4:50p	1:33p	1.7 f
	10:51a	7:23a	2.2e	6:36a	10:08a	2.0e	11:18a	7:44a	2.3e	10:23p	7:07p	1.2e						
	5:12p	1:55p	3.5 f	1:43p	4:52p	2.4 f	6:01p	2:18p	1.9 f	4:30a	1:23a	1.3 f						
Fri. 7/28	11:25p	8:09p	1.6e	8:20p	11:18p	1.3e	11:44p	8:42p	1.5e	10:25a	6:59a	1.4e						
	5:09a	2:18a	2.6 f	2:03a	4:40a	1.5 f	5:29a	2:14a	1.4 f	4:30a	1:23a	1.3 f						
	11:28a	8:18a	1.9e	7:33a	10:57a	1.8e	11:58a	8:31a	1.9e	10:25a	6:59a	1.4e						
	6:00p	2:43p	3.2 f	2:21p	5:32p	2.3 f	6:44p	2:55p	1.8 f	5:32p	2:04p	1.6 f						
Sat. 7/29	9:02p	1:5e	9:04p				9:34p	1:5e		11:15p	7:52p	1.2e						
	12:31a	3:17a	2.2 f	3:13a	12:16a	1.3e	12:50a	3:15a	1.2 f	5:31a	2:17a	1.2 f						
	6:13a	9:15a	1.5e	8:38a	5:48a	1.2 f	6:31a	9:23a	1.6e	11:11a	7:56a	1.2e						
	12:05p	3:32p	2.9 f	3:00p	11:53a	1.5e	12:42p	3:37p	1.7 f	6:15p	2:39p	1.5 f						
	6:52p	9:57p	1.4e	9:49p	6:14p	2.1 f	7:28p	10:34p	1.5e	8:38p	1:2e							
Sun. 7/30	1:46a	4:20a	1.9 f	4:30a	1:19a	1.4e	2:00a	4:28a	1.0 f	12:11a	3:19a	1.1 f						
	7:29a	10:13a	1.2e	9:54a	7:17a	1.0 f	7:42a	10:23a	1.2e	6:40a	8:58a	1.0e						
	12:47p	4:22p	2.6 f	3:42p	12:55p	1.2e	1:29p	4:24p	1.6 f	12:02p	3:21p	1.4 f						
	7:46p	10:53p	1.4e	10:34p	6:59p	2.0 f	8:14p	11:40p	1.6e	7:00p	9:25p	1.2e						
Mon. 7/31	2:58a	5:32a	1.8 f	5:51a	2:26a	1.5e	3:10a	6:14a	1.0 f	1:10a	4:41a	1.1 f						
	8:49a	11:12a	1.0e	11:18a	8:48a	1.1 f	9:01a	11:35a	1.0e	7:51a	10:05a	0.9e						
	1:34p	5:15p	2.4 f	4:27p	2:01p	0.9e	2:22p	5:14p	1.5 f	12:59p	4:08p	1.4 f						
	8:38p	11:49p	1.4e	11:18p	7:47p	1.9 f	9:02p			7:46p	10:14p	1.2e						
Tue. 8/1	4:02a	6:47a	1.9 f	7:03a	3:32a	1.6e	4:15a	12:45a	1.8e	2:10a	6:15a	1.1 f						
	10:01a	12:09p	0.9e	12:40p	9:59a	1.3 f	10:20a	7:42a	1.1 f	9:00a	11:15a	0.9e						
	2:25p	6:10p	2.2 f	5:16p	3:06p	0.8e	3:17p	12:51p	0.8e	1:58p	5:01p	1.3 f						
	9:27p				8:37p	1.8 f	9:50p	6:07p	1.4 f	8:32p	11:03p	1.2e						
Wed. 8/2	4:57a	12:40a	1.4e	12:01a	4:31a	1.8e	5:12a	1:40a	1.9e	3:06a	7:21a	1.3 f						
	11:00a	7:47a	2.1 f	8:01a	10:56a	1.5 f	11:30a	8:45a	1.3 f	10:02a	12:21p	0.9e						
	3:18p	1:01p	0.9e	1:52p	4:08p	0.7e	4:12p	1:56p	0.8e	2:58p	5:55p	1.3 f						
	10:11p	7:03p	2.2 f	6:07p	9:26p	1.8 f	10:35p	6:59p	1.4 f	9:18p	11:50p	1.2e						
Thu. 8/3	5:44a	1:22a	1.5e	12:42a	5:20a	1.9e	6:02a	2:25a	2.0e	3:58a	8:16a	1.5 f						
	11:48a	8:34a	2.3 f	8:47a	11:45a	1.7 f	12:28p	9:38a	1.5 f	10:58a	1:18p	1.0e						
	4:09p	1:49p	1.0e	2:52p	5:04p	0.7e	5:05p	2:51p	0.9e	3:55p	6:47p	1.3 f						
Fri. 8/4	6:25a	1:59a	1.6e	1:21a	5:59a	2.0e	6:45a	3:03a	2.1e	4:45a	12:35a	1.3e						
	12:30p	9:14a	2.5 f	9:26a	12:28p	1.9 f	1:16p	10:23a	1.6 f	11:48a	9:04a	1.6 f						
	4:59p	2:33p	1.0e	3:42p	5:56p	0.7e	5:54p	3:38p	0.9e	4:48p	2:07p	1.0e						
	11:31p	8:37p	2.3 f	7:50p	10:55p	1.9 f	11:58p	8:37p	1.5 f	10:46p	7:38p	1.3 f						
Sat. 8/5	7:01a	2:34a	1.7e	1:59a	6:28a	2.0e	7:23a	3:34a	2.2e	5:27a	1:18a	1.3 e						
	1:07p	9:51a	2.6 f	10:00a	1:07p	1.9 f	1:58p	11:01a	1.7 f	12:34p	9:46a	1.6 f						
	5:46p	3:17p	1.1e	4:25p	6:43p	0.8e	6:39p	4:19p	0.9e	5:36p	2:50p	1.0e						
	9:20p	2.4 f	8:38p	11:38p	1.9 f		9:21p	1.5 f		11:29p	8:26p	1.3 f						
Sun. 8/6	12:09a	3:10a	1.8e	2:38a	6:41a	2.1e	12:36a	4:04a	2.3e	6:03a	2:00a	1.4e						
	7:34a	10:26a	2.8 f	10:31a	1:40p	1.9 f	7:58a	11:30a	1.6 f	1:15p	10:22a	1.6 f						
	1:42p	4:02p	1.2e	5:01p	7:26p	0.8e	2:36p	4:55p	1.0e	6:20p	3:26p	1.0e						
	6:31p	10:03p	2.5 f	9:25p			7:21p	10:03p	1.6 f	9:13p	1:33p	1.3 f						
Mon. 8/7	12:47a	3:51a	1.9e	3:17a	12:21a	2.0 f	1:14a	4:36a	2.3e	12:09a	2:43a	1.5e						
	8:04a	11:01a	2.9 f	10:59a	6:54a	2.1e	8:30a	11:39a	1.6 f	6:36a	10:49a	1.6 f						
	2:15p	4:45p	1.3e	5:33p	2:07p	2.0 f	3:09p	5:27p	1.0e	1:51p	3:58p	1.0e						
	7:14p	10:46p	2.7 f	10:11p	8:04p	0.9e	8:01p	10:45p	1.6 f	6:58p	9:57p	1.3 f						
Tue. 8/8	1:26a	4:34a	2.1e	3:58a	1:04a	2.0 f	1:51a	5:11a	2.4 e	12:50a	3:26a	1.6 f						
	8:32a	11:36a	3.1 f	11:27a	7:22a	2.2 e	8:59a	11:50a	1.7 f	7:07a	11:11a	1.6 f						
	2:47p	5:23p	1.4e	6:01p	2:28p	2.0 f	3:39p	5:58p	1.1 e	2:25p	4:29p	1.1 e						
	7:56p	11:28p	2.8 f	10:56p	8:37p	0.9e	8:41p	11:27p	1.7 f	7:33p	10:39p	1.4 f						
Wed. 8/9	2:07a	5:14a	2.2 e	4:41a	1:49a	2.0 f	2:30a	5:49a	2.4 e	1:31a	4:10a	1.6 e						
	9:02a	12:13p	3.2 f	11:56a	7:57a	2.3 e	9:29a	12:16p	1.8 f	7:37a	11:33a	1.6 f						
	3:19p	5:57p	1.5e	6:26p	2:51p	2.1 f	4:08p	6:32p	1.3 e	2:55p	5:02p	1.2 e						
	8:40p			11:43p	9:04p	1.0e	9:23p			8:06p	11:20p	1.4 f						
Thu. 8/10	2:50a	12:11a	2.9 f	5:26a	2:35a	1.9 f	3:11a	12:10a	1.7 f	2:13a	4:55a	1.7 e						
	9:33a	5:52a	2.2e	12:25p	8:37a	2.2 e	9:59a	6:29a	2.4 e	8:11a	12:01p	1.6 f						
	3:51p	12:51p	3.3 f	6:52p	3:19p	2.2 f	4:37p	12:49p	1.9 f	3:26p	5:38p	1.2 e						
	9:26p	6:28p	1.7e		9:29p	1.2e	10:10p	7:09p	1.4 e	8:41p								
Fri. 8/11	3:36a	12:56a	2.8 f	12:32a	3:23a	1.8 f	3:58a	12:57a	1.6 f	2:59a	12:02a	1.4 f						
	10:06a	6:31a	2.1e	6:14a	9:20a	2.1 e	10:33a	7:12a	2.2 e	8:49a	5:43a	1.6 e						
	4:26p	1:32p	3.3 f	12:56p	3:52p	2.3 f	5:09p	1:27p	2.0 f	3:58p	12:35p	1.7 f						
	10:14p	7:01p	1.8e	7:20p	9:59p	1.3 e	11:03p	7:51p	1.6 e	9:21p	6:19p	1.3 e						
Sat. 8/12	4:26a	1:45a	2.7 f	1:27a	4:14a	1.7 f	4:50a	1:47a	1.5 f	3:51a	12:47a	1.3 f						
	10:42a	7:16a	1.9e	7:07a	10:07a	1.9 e	11:10a	7:59a	2.0 e	9:31a	6:34a	1.5 e						
	5:05p	2:16p	3.2 f	1:30p	4:31p	2.3 f	5:46p	2:10p	2.0 f	4:36p	1:15p	1.7 f						
	11:07p	7:42p	1.9e	7:53p	10:36p	1.4 e	8:37p	1.7 e		10:09p	7:04p	1.4 e						
Sun. 8/13	5:																	

GOLDEN GATE

BENICIA BRIDGE

RICHMOND

OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Sat. 8/19	5:58a	1:45a	2.3e	1:16a	5:53a	2.1e	6:43a	2:53a	2.6e	4:57a	12:44a	1.7e						
	12:06p	8:51a	3.3 f	9:14a	12:10p	2.1 f	1:10p	10:15a	1.9 f	11:53a	9:11a	1.8 f						
	5:42p	2:41p	1.5e	3:11p	5:41p	1.0e	6:00p	3:33p	1.2e	4:57p	2:06p	1.2e						
	11:40p	8:51p	3.2 f	8:00p	11:06p	2.2 f				11:08p	8:06p	1.5 f						
Sun. 8/20	6:51a	2:42a	2.4e	2:10a	6:40a	2.2e	12:14a	3:43a	2.7e	5:50a	1:39a	1.7e						
	12:51p	9:41a	3.5 f	9:57a	12:53p	2.2 f	7:28a	10:58a	2.0 f	12:42p	9:59a	1.9 f						
	6:46p	3:34p	1.7e	3:58p	6:38p	1.2e	1:56p	4:24p	1.4e	5:52p	2:57p	1.3e						
	9:46p	3:4 f	9:01p	12:00p	2.2 f	6:56p	9:46p	2.0 f				9:03p	1.6 f					
Mon. 8/21	12:36a	3:43a	2.4e	3:03a	7:19a	2.2e	1:06a	4:29a	2.7e	12:01a	2:31a	1.7e						
	7:40a	10:28a	3.7 f	10:37a	1:34p	2.3 f	8:10a	11:34a	2.0 f	6:36a	10:42a	1.9 f						
	1:36p	4:28p	1.8e	4:42p	7:30p	1.3e	2:38p	5:11p	1.5e	1:27p	3:43p	1.3e						
	7:43p	10:38p	3.5 f	9:58p			7:49p	10:36p	2.0 f	6:43p	9:56p	1.6 f						
Tue. 8/22	1:30a	4:44a	2.4e	3:53a	12:52a	2.2 f	1:55a	5:13a	2.6e	12:52a	3:21a	1.7e						
	8:24a	11:14a	3.8 f	11:14a	7:52a	2.2e	8:49a	12:02p	2.0 f	7:18a	11:20a	1.9 f						
	2:19p	5:19p	2.0e	5:25p	2:13p	2.4 f	3:17p	5:55p	1.6e	2:09p	4:25p	1.4e						
	8:37p	11:29p	3.5 f	10:53p	8:18p	1.4e	8:40p	11:24p	1.9 f	7:31p	10:43p	1.6 f						
Wed. 8/23	2:23a	5:38a	2.3e	4:43a	1:44a	2.1 f	2:43a	5:54a	2.4e	1:42a	4:10a	1.7e						
	9:06a	11:57a	3.8 f	11:49a	8:24a	2.1e	9:25a	12:25p	1.9 f	7:56a	11:50a	1.8 f						
	3:02p	6:05p	2.0e	6:05p	2:50p	2.4 f	3:54p	6:37p	1.7e	2:48p	5:03p	1.3e						
	9:28p			11:47p	9:02p	1.4e	9:31p			8:16p	11:28p	1.5 f						
Thu. 8/24	3:16a	12:18a	3.4 f	5:33a	2:35a	1.9 f	3:31a	12:11a	1.8 f	2:30a	4:57a	1.6e						
	9:43a	6:25a	2.2e	12:24p	8:59a	2.0e	10:01a	6:35a	2.2e	8:32a	12:14p	1.7 f						
	3:45p	12:40p	3.7 f	6:43p	3:25p	2.3 f	4:30p	12:51p	1.9 f	3:25p	5:40p	1.3e						
	10:18p	6:47p	2.0e		9:44p	1.4e	10:22p	7:17p	1.7e	8:59p								
Fri. 8/25	4:10a	1:08a	3.1 f	12:42a	3:27a	1.7 f	4:21a	12:59a	1.6 f	3:19a	12:11a	1.4 f						
	10:18a	7:11a	1.9e	6:24a	9:38a	1.8e	10:36a	7:17a	2.0e	9:09a	5:44a	1.5e						
	4:26p	1:23p	3.4 f	12:58p	3:59p	2.2 f	5:06p	1:23p	1.8 f	4:01p	12:38p	1.6 f						
	11:07p	7:27p	1.9e	7:21p	10:23p	1.4e	11:16p	7:57p	1.7e	9:42p	6:18p	1.3e						
Sat. 8/26	5:05a	2:00a	2.8 f	1:39a	4:23a	1.5 f	5:14a	1:50a	1.4 f	4:11a	12:55a	1.3 f						
	10:50a	8:00a	1.6e	7:20a	10:23a	1.5e	11:13a	8:01a	1.7e	9:49a	6:34a	1.3e						
	5:08p	2:07p	3.0 f	1:33p	4:34p	2.1 f	5:43p	2:01p	1.7 f	4:37p	1:09p	1.5 f						
	11:59p	8:08p	1.7e	7:59p	11:04p	1.4e		8:40p	1.7e	10:27p	6:58p	1.2e						
Sun. 8/27	6:07a	2:54a	2.4 f	2:41a	5:28a	1.2 f	12:14a	2:45a	1.2 f	5:10a	1:45a	1.2 f						
	11:24a	8:52a	1.3e	8:25a	11:17a	1.2e	6:14a	8:50a	1.3e	10:35a	7:30a	1.1e						
	5:51p	2:53p	2.6 f	2:10p	5:12p	2.0 f	11:55a	2:44p	1.6 f	5:16p	1:47p	1.4 f						
	8:52p	1.5e	8:39p	11:53p	1.4e		6:23p	9:28p	1.6e	11:17p	7:41p	1.2e						
Mon. 8/28	12:58a	3:53a	2.1 f	3:51a	6:54a	1.1 f	1:18a	3:52a	1.1 f	6:16a	2:44a	1.1 f						
	7:18a	9:48a	1.0e	9:41a	12:21p	0.9e	7:24a	9:49a	1.0e	11:28a	8:31a	1.0e						
	12:03p	3:40p	2.2 f	2:53p	5:56p	1.8 f	12:44p	3:33p	1.4 f	6:00p	2:33p	1.4 f						
	6:39p	9:42p	1.3e	9:24p			7:09p	10:25p	1.6e	8:28p		1.1e						
Tue. 8/29	2:03a	4:58a	1.9 f	5:06a	1:01a	1.4e	2:25a	5:33a	1.0 f	12:13a	4:02a	1.0 f						
	8:34a	10:45a	0.9e	11:05a	8:23a	1.1 f	8:41a	11:01a	0.8e	7:27a	9:40a	0.9e						
	12:53p	4:32p	1.9 f	3:43p	1:30p	0.7e	1:43p	4:27p	1.3 f	12:30p	3:25p	1.3 f						
	7:33p	10:39p	1.1e	10:14p	6:47p	1.6 f	8:01p	11:33p	1.6e	6:50p	9:19p	1.1e						
Wed. 8/30	3:07a	6:09a	1.9 f	6:17a	2:27a	1.4e	3:30a	7:11a	1.1 f	1:15a	5:45a	1.1 f						
	9:42a	11:43a	0.8e	12:24p	9:33a	1.3 f	9:59a	12:24p	0.7e	8:34a	10:53a	0.9e						
	1:53p	5:28p	1.6 f	4:41p	2:40p	0.7e	2:48p	5:25p	1.2 f	1:34p	4:22p	1.2 f						
	8:32p	11:43p	1.1e	11:08p	7:46p	1.6 f	8:57p			7:45p	10:13p	1.1e						
Thu. 8/31	4:03a	7:12a	2.0 f	7:16a	3:38a	1.5e	4:29a	12:42a	1.7e	2:17a	6:52a	1.3 f						
	10:36a	12:38p	0.9e	1:29p	10:28a	1.6 f	11:04a	8:15a	1.3 f	9:35a	12:00p	0.9e						
	2:58p	6:26p	1.6 f	5:44p	3:43p	0.7e	3:50p	1:34p	0.8e	2:37p	5:22p	1.2 f						
	9:29p			12:00p	8:48p	1.6 f	9:53p	6:25p	1.2 f	8:40p	11:08p	1.1e						
Fri. 9/1	4:53a	12:40a	1.1e	8:03a	4:31a	1.7e	5:20a	1:37a	1.8e	3:14a	7:43a	1.4 f						
	11:20a	7:59a	2.2 f	2:20p	11:14a	1.8 f	11:57a	9:05a	1.5 f	10:28a	12:54p	1.0e						
	3:58p	1:26p	1.0e	6:45p	4:41p	0.8e	4:47p	2:27p	0.9e	3:34p	6:20p	1.2 f						
	10:20p	7:21p	1.7 f		9:45p	1.7 f	10:45p	7:22p	1.3 f	9:33p								
Sat. 9/2	5:35a	1:27a	1.3e	12:50a	5:11a	1.8e	6:03a	2:20a	1.9e	4:05a	12:01a	1.2e						
	11:56a	8:37a	2.4 f	8:41a	11:54a	1.9 f	12:39p	9:47a	1.6 f	11:15a	8:28a	1.5 f						
	4:51p	2:09p	1.2e	3:02p	5:31p	0.9e	5:37p	3:11p	1.0e	4:25p	1:39p	1.1e						
	11:06p	8:10p	2.0 f	7:40p	10:36p	1.8 f	11:32p	8:14p	1.4 f	10:22p	7:14p	1.3 f						
Sun. 9/3	6:12a	2:08a	1.4e	1:36a	5:40a	1.9e	6:42a	2:56a	2.0e	4:50a	12:50a	1.3e						
	12:28p	9:13a	2.6 f	9:15a	12:27p	2.0 f	1:16p	10:18a	1.6 f	11:57a	9:06a	1.6 f						
	5:38p	2:50p	1.3e	3:38p	6:17p	1.0e	6:22p	3:48p	1.1e	5:11p	2:16p	1.1e						
	11:49p	8:57p	2.2 f	8:29p	11:22p	1.9 f	9:01p	1.5 f		11:09p	8:04p	1.3 f						
Mon. 9/4	6:45a	2:49a	1.6e	2:20a	6:03a	2.0e	12:15a	3:31a	2.1e	5:30a	1:37a	1.4e						
	12:58p	9:48a	2.8 f	9:46a	12:54p	2.0 f	7:17a	10:32a	1.6 f	12:34p	9:37a	1.6 f						
	6:22p	3:30p	1.5e	4:09p	6:56p	1.1e	1:49p	4:21p	1.3e	5:51p	2:47p	1.1e						
	9:42p	2:5 f	9:16p				7:04p	9:44p										

**GOLDEN
GATE**
**BENICIA
BRIDGE**
RICHMOND
OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Mon. 9/11	5:23a	2:21a	3.0 f	2:19a	5:07a	1.6 f	6:08a	2:34a	1.5 f	4:58a	1:30a	1.3 f						
	10:52a	7:58a	1.4e	8:17a	10:47a	1.2e	11:24a	8:37a	1.4e	10:08a	7:17a	1.2e						
	5:03p	2:31p	3.0 f	1:34p	4:42p	2.3 f	5:46p	2:29p	1.9 f	4:43p	1:37p	1.6 f						
Tue. 9/12	11:42p	7:46p	2.5e	7:47p	10:44p	1.8e	9:04p	2.1e		10:41p	7:23p	1.6e						
	6:31a	3:19a	2.8 f	3:30a	6:22a	1.4 f	1:03a	3:43a	1.3 f	6:13a	2:41a	1.2 f						
	11:43a	9:12a	1.1e	9:33a	11:52a	0.9e	7:25a	9:41a	1.1e	11:12a	8:23a	1.0e						
Wed. 9/13	5:55p	3:25p	2.7 f	2:24p	5:34p	2.1 f	12:21p	3:25p	1.7 f	5:40p	2:33p	1.5 f						
	8:41p	2.3e		8:43p	11:46p	1.7e	6:44p	10:07p	2.1e	11:53p	8:19p	1.5e						
	12:45a	4:21a	2.7 f	4:47a	7:53a	1.4 f	2:18a	5:14a	1.3 f	7:31a	4:18a	1.2 f						
Thu. 9/14	7:49a	10:29a	1.0e	10:53a	1:07p	0.8e	8:47a	10:57a	0.9e	12:26p	9:35a	0.9e						
	12:47p	4:24p	2.5 f	3:26p	6:35p	1.9 f	1:32p	4:28p	1.6 f	6:45p	3:35p	1.4 f						
	6:57p	9:47p	2.0e	9:49p			7:52p	11:21p	2.1e	9:20p	1.5e							
Fri. 9/15	1:59a	5:27a	2.7 f	6:02a	1:10a	1.6e	3:29a	7:04a	1.4 f	1:16a	5:56a	1.4 f						
	9:03a	11:41a	1.1e	12:07p	9:11a	1.6 f	10:03a	12:21p	0.9e	8:41a	10:50a	1.0e						
	2:06p	5:29p	2.4 f	4:40p	2:25p	0.8e	2:48p	5:36p	1.5 f	1:40p	4:43p	1.4 f						
Sat. 9/16	8:09p	11:07p	1.9e	11:01p	7:45p	1.8 f	9:03p			7:54p	10:24p	1.4e						
	3:17a	6:33a	2.8 f	7:06a	3:42a	1.7e	4:32a	12:39a	2.2e	2:34a	7:03a	1.6 f						
	10:05a	12:44p	1.3e	1:09p	10:11a	1.8 f	11:06a	8:12a	1.6 f	9:43a	12:01p	1.1e						
Sun. 9/17	3:30p	6:37p	2.5 f	5:56p	3:37p	1.0e	4:00p	1:34p	1.1e	2:49p	5:53p	1.4 f						
	9:24p				8:58p	1.9 f	10:11p	6:45p	1.6 f	9:00p	11:29p	1.5e						
	4:27a	12:33a	1.9e	12:10a	4:49a	1.9e	5:27a	1:46a	2.3e	3:41a	7:57a	1.8 f						
Mon. 9/18	10:56a	7:34a	3.1 f	7:58a	11:01a	2.1 f	11:57a	9:05a	1.8 f	10:38a	12:59p	1.2e						
	4:47p	1:39p	1.6e	2:00p	4:41p	1.2e	5:04p	2:32p	1.3e	3:51p	6:58p	1.5 f						
	10:33p	7:41p	2.7 f	7:07p	10:07p	1.9 f	11:13p	7:52p	1.7 f	10:02p								
Tue. 9/19	5:28a	1:40a	2.0e	1:12a	5:39a	2.0e	6:14a	2:41a	2.4e	4:38a	12:31a	1.5e						
	11:42a	8:27a	3.4 f	8:43a	11:44a	2.2 f	12:42p	9:49a	1.9 f	11:27a	8:46a	1.9 f						
	5:53p	2:29p	1.8e	2:45p	5:38p	1.4e	6:01p	3:23p	1.6e	4:47p	1:49p	1.4e						
Mon. 9/18	11:36p	8:40p	3.0 f	8:10p	11:06p	2.0 f		8:53p	1.8 f	10:59p	7:58p	1.6 f						
	6:21a	2:37a	2.0e	2:07a	6:21a	2.0e	12:08a	3:28a	2.4e	5:26a	1:26a	1.6e						
	12:24p	9:16a	3.6 f	9:23a	12:24p	2.3 f	6:57a	10:26a	2.0 f	12:11p	9:30a	1.9 f						
Tue. 9/19	6:51p	3:19p	2.1e	3:26p	6:29p	1.5e	1:22p	4:09p	1.7e	5:37p	2:34p	1.4e						
	9:35p	3:3 f		9:07p	11:59p	2.1 f	6:54p	9:45p	1.9 f	11:52p	8:53p	1.6 f						
	12:34a	3:34a	2.0e	2:58a	6:57a	2.0e	12:59a	4:11a	2.3e	6:08a	2:17a	1.6e						
Wed. 9/20	7:09a	10:02a	3.7 f	9:59a	1:00p	2.4 f	7:36a	10:54a	1.9 f	12:52p	10:09a	1.8 f						
	1:05p	4:08p	2.2e	4:05p	7:15p	1.6e	1:59p	4:50p	1.9e	6:24p	3:14p	1.4e						
	7:44p	10:28p	3.5 f	9:59p			7:43p	10:31p	1.9 f	9:44p	1:46p	1.6 f						
Thu. 9/21	1:28a	4:30a	2.0e	3:47a	12:49a	2.0 f	1:48a	4:52a	2.2e	12:42a	3:05a	1.6e						
	7:52a	10:46a	3.8 f	10:33a	7:28a	1.9e	8:12a	11:12a	1.9 f	6:46a	10:40a	1.7 f						
	1:46p	4:55p	2.3e	4:41p	1:33p	2.3 f	2:34p	5:29p	1.9e	1:30p	3:50p	1.4e						
Fri. 9/22	8:34p	11:17p	3.5 f	10:49p	7:55p	1.6e	8:31p	11:15p	1.8 f	7:06p	10:30p	1.6 f						
	2:22a	5:21a	1.9e	4:36a	1:38a	1.9 f	2:35a	5:31a	2.0e	1:30a	3:52a	1.5e						
	8:31a	11:28a	3.7 f	11:05a	7:58a	1.7e	8:46a	11:34a	1.8 f	7:21a	11:02a	1.6 f						
Sat. 9/23	2:25p	5:37p	2.4e	5:15p	2:04p	2.3 f	3:06p	6:05p	2.0e	2:05p	4:23p	1.4e						
	9:21p			11:38p	8:28p	1.6e	9:17p	11:58p	1.7 f	7:46p	11:11p	1.5 f						
	3:15a	12:05a	3.4 f	5:26a	2:27a	1.8 f	3:23a	6:11a	1.8 e	2:17a	4:37a	1.4 e						
Sun. 9/24	9:06a	6:07a	1.8e	11:37a	8:31a	1.6e	9:19a	12:02p	1.8 f	7:57a	11:23a	1.6 f						
	3:03p	12:09p	3.5 f	5:47p	2:35p	2.2 f	3:37p	6:39p	2.0e	2:37p	4:57p	1.4 e						
	10:05p	6:12p	2.3e		8:52p	1.6e	10:02p			8:24p	11:51p	1.4 f						
Mon. 9/25	4:08a	12:52a	3.2 f	12:27a	3:17a	1.6 f	4:13a	12:41a	1.6 f	3:05a	5:23a	1.3 e						
	9:38a	6:51a	1.6e	6:18a	9:10a	1.4e	9:53a	6:51a	1.6e	8:34a	11:50a	1.5 f						
	3:40p	12:49p	3.2 f	12:09p	3:07p	2.1 f	4:07p	12:36p	1.7 f	3:08p	5:32p	1.4 e						
Tue. 9/26	10:46p	6:42p	2.2e	6:19p	9:15p	1.6e	10:49p	7:14p	1.9e	8:59p								
	5:02a	1:40a	2.9 f	1:17a	4:11a	1.5 f	5:06a	1:28a	1.5 f	3:56a	12:31a	1.3 f						
	10:10a	7:38a	1.3e	7:15a	9:56a	1.2e	10:30a	7:35a	1.3e	9:16a	6:11a	1.2e						
Wed. 9/27	4:15p	1:30p	2.8 f	12:43p	3:42p	2.0 f	4:39p	1:16p	1.6 f	3:40p	12:24p	1.4 f						
	11:24p	7:08p	2.0e	6:52p	9:46p	1.6e	11:39p	7:51p	1.9e	9:36p	6:10p	1.3e						
	6:21p	2:31a	2.6 f	2:10a	5:12a	1.3 f	6:05a	2:19a	1.3 f	4:52a	1:16a	1.2 f						
Mon. 9/25	10:43a	8:29a	1.1e	8:20a	10:50a	0.9e	11:13a	8:24a	1.1e	10:04a	7:05a	1.0e						
	4:51p	2:13p	2.3 f	1:22p	4:21p	1.9 f	5:16p	2:00p	1.5 f	4:16p	1:06p	1.4 f						
	7:37p	1.7e		7:30p	10:27p	1.6e		8:34p	1.8e	10:17p	6:52p	1.3e						
Tue. 9/26	12:01a	3:23a	2.3 f	3:09a	6:28a	1.2 f	12:35a	3:18a	1.2 f	5:55a	2:10a	1.1 f						
	7:07a	9:23a	0.9e	9:33a	11:54a	0.7e	7:10a	9:20a	0.8e	11:01a	8:06a	0.9e						
	11:24a	2:59p	1.8 f	2:09p	5:07p	1.7 f	12:05p	2:51p	1.3 f	5:00p	1:55p	1.3 f						
Wed. 9/27	5:30p	8:15p	1.4e	8:15p	11:18p	1.5e	6:00p	9:23p	1.7 e	11:07p	7:39p	1.2e						
	12:39a	4:20a	2.1 f	4:12a	7:49a</													

GOLDEN GATE

BENICIA BRIDGE

RICHMOND

OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Wed. 10/4	12:15a	3:06a	1.6e	2:49a	5:54a	1.9e	12:40a	3:36a	2.0e	5:29a	2:00a	1.4e	12:22p	9:12a	1.6f			
	6:21a	9:47a	3.2 f	9:24a	12:20p	2.1 f	7:01a	9:49a	1.8 f	5:57p	2:38p	1.4e						
	12:43p	3:33p	2.1e	3:36p	6:47p	1.5e	1:25p	4:15p	1.8e									
	6:58p	10:07p	2.9 f	9:49p			7:29p	10:10p	1.8 f									
Thu. 10/5	1:02a	3:50a	1.7e	3:38a	12:38a	2.0 f	1:29a	4:19a	2.0e	12:24a	2:47a	1.5e						
	6:59a	10:26a	3.5 f	9:55a	6:34a	1.8e	7:34a	10:22a	1.9 f	6:06a	9:44a	1.6 f						
	1:14p	4:06p	2.4e	3:59p	12:48p	2.2 f	1:53p	4:51p	2.0e	12:54p	3:14p	1.5e						
	7:41p	10:53p	3.2 f	10:35p	7:05p	1.7e	8:13p	10:56p	1.9 f	6:32p	10:05p	1.5 f						
Fri. 10/6	1:49a	4:36a	1.7e	4:29a	1:25a	2.1 f	2:19a	5:03a	1.9e	1:12a	3:34a	1.5e						
	7:37a	11:06a	3.6 f	10:27a	7:16a	1.7e	8:09a	10:59a	2.0 f	6:45a	10:19a	1.7 f						
	1:47p	4:38p	2.7e	4:27p	1:21p	2.3 f	2:23p	5:29p	2.2e	1:26p	3:52p	1.6e						
	8:24p	11:38p	3.4 f	11:23p	7:27p	1.9e	8:59p	11:43p	1.9 f	7:09p	10:52p	1.5 f						
Sat. 10/7	2:38a	5:20a	1.7e	5:22a	2:14a	2.0 f	3:12a	5:50a	1.8e	2:03a	4:23a	1.5e						
	8:15a	11:46a	3.6 f	11:00a	8:00a	1.5e	8:45a	11:39a	2.0 f	7:26a	10:57a	1.7 f						
	2:22p	5:12p	2.9 e	4:59p	1:58p	2.4 f	2:56p	6:11p	2.4e	2:01p	4:33p	1.7e						
	9:07p			7:59p	2.1e		9:49p			7:49p	11:40p	1.5 f						
Sun. 10/8	3:30a	12:24a	3.5 f	12:15a	3:07a	2.0 f	4:10a	12:33a	1.8 f	2:57a	5:14a	1.4e						
	8:55a	6:04a	1.5e	6:19a	8:48a	1.3e	9:25a	6:39a	1.6e	8:12a	11:39a	1.7 f						
	3:00p	12:29p	3.5 f	11:37a	2:40p	2.4 f	3:35p	12:23p	2.0 f	2:40p	5:17p	1.8e						
	9:50p	5:49p	3.1e	5:38p	8:39p	2.1e	10:43p	6:57p	2.5e	8:34p								
Mon. 10/9	4:23a	1:13a	3.5 f	1:10a	4:04a	1.9 f	5:12a	1:29a	1.7 f	3:56a	12:33a	1.4 f						
	9:38a	6:51a	1.4e	7:20a	9:41a	1.1e	10:10a	7:31a	1.3e	9:04a	6:08a	1.2e						
	3:42p	1:14p	3.2 f	12:20p	3:26p	2.3 f	4:21p	1:11p	1.9 f	3:24p	12:25p	1.6 f						
	10:35p	6:29p	3.0e	6:22p	9:25p	2.1e	11:42p	7:47p	2.5e	9:25p	6:04p	1.8e						
Tue. 10/10	5:21a	2:04a	3.3 f	2:11a	5:08a	1.7 f	6:20a	2:31a	1.6 f	5:01a	1:35a	1.4 f						
	10:26a	7:49a	1.2e	8:27a	10:42a	0.9e	11:04a	8:30a	1.1e	10:04a	7:09a	1.1e						
	4:28p	2:04p	2.9 f	1:10p	4:17p	2.2 f	5:14p	2:05p	1.7 f	4:15p	1:18p	1.5 f						
	11:24p	7:14p	2.8e	7:14p	10:19p	2.0e		8:42p	2.3e	10:25p	6:57p	1.6e						
Wed. 10/11	6:26a	3:00a	3.2 f	3:17a	6:22a	1.6 f	12:48a	3:49a	1.5 f	6:11a	2:52a	1.3 f						
	11:24a	9:04a	1.0e	9:39a	11:55a	0.8e	7:31a	9:38a	0.9e	11:12a	8:17a	1.0e						
	5:22p	3:00p	2.5 f	2:13p	5:14p	2.0 f	12:12p	3:06p	1.6 f	5:16p	2:17p	1.4 f						
	8:09p	2.4e		8:16p	11:29p	1.8e	6:18p	9:47p	2.2e	11:39p	7:55p	1.5e						
Thu. 10/12	12:22a	4:00a	3.0 f	4:25a	7:40a	1.7 f	1:56a	5:29a	1.5 f	7:20a	4:20a	1.4 f						
	7:38a	10:17a	1.0e	10:51a	1:14p	0.8e	8:43a	10:59a	0.9e	12:25p	9:30a	1.0e						
	12:38p	4:02p	2.2 f	3:27p	6:20p	1.7 f	1:32p	4:14p	1.4 f	6:27p	3:22p	1.3 f						
	6:27p	9:19p	2.0e	9:29p			7:32p	11:02p	2.1e	8:59p	1:45p	1.4e						
Fri. 10/13	1:31a	5:03a	3.0 f	5:32a	1:50a	1.6e	3:02a	6:47a	1.6 f	12:59a	5:37a	1.5 f						
	8:46a	11:27a	1.1e	11:55a	8:49a	1.8 f	9:48a	12:20p	1.1e	8:23a	10:43a	1.1e						
	2:11p	5:10p	2.1 f	4:48p	2:28p	1.0e	2:51p	5:27p	1.4 f	1:36p	4:31p	1.3 f						
	7:47p	10:50p	1.7e	10:49p	7:37p	1.6 f	8:48p			7:40p	10:06p	1.3e						
Sat. 10/14	2:46a	6:08a	3.0 f	6:31a	3:23a	1.7e	4:01a	12:21a	2.1e	2:14a	6:38a	1.7 f						
	9:44a	12:31p	1.4e	12:49p	9:45a	2.1 f	10:42a	7:46a	1.8 f	9:20a	11:48a	1.2e						
	3:40p	6:21p	2.2 f	6:06p	3:36p	1.2e	4:02p	1:27p	1.4e	2:41p	5:44p	1.4 f						
	9:11p			8:59p	1.6 f		10:00p	6:45p	1.4 f	8:49p	11:15p	1.3e						
Sun. 10/15	3:54a	12:22a	1.7e	12:03a	4:22a	1.8e	4:53a	1:28a	2.1e	3:16a	7:28a	1.8 f						
	10:32a	7:08a	3.2 f	7:21a	10:32a	2.3 f	11:28a	8:35a	1.9 f	10:10a	12:42p	1.4e						
	4:52p	1:26p	1.8e	1:35p	4:36p	1.5e	5:04p	2:21p	1.7e	3:40p	6:52p	1.5 f						
	10:26p	7:29p	2.5 f	7:16p	10:11p	1.7 f	11:03p	7:59p	1.6 f	9:52p								
Mon. 10/16	4:52a	1:27a	1.7e	1:07a	5:11a	1.8e	5:38a	2:22a	2.1e	4:09a	12:19a	1.4 e						
	11:16a	8:01a	3.5 f	8:04a	11:14a	2.4 f	12:09p	9:15a	2.0 f	10:56a	8:14a	1.8 f						
	5:54p	2:15p	2.1 e	2:17p	5:30p	1.7e	6:00p	3:08p	1.9 e	4:32p	1:27p	1.5 e						
	11:32p	8:30p	2.8 f	8:17p	11:10p	1.9 f	12:00p	8:59p	1.7 f	10:49p	7:52p	1.6 f						
Tue. 10/17	5:44a	2:21a	1.7e	2:03a	5:52a	1.7e	6:19a	3:08a	2.0e	4:54a	1:14a	1.4 e						
	11:56a	8:48a	3.7 f	8:42a	11:50a	2.4 f	12:46p	9:46a	1.9 f	11:37a	8:54a	1.8 f						
	6:48p	3:00p	2.3 e	2:54p	6:18p	1.8e	6:50p	3:50p	2.1e	5:20p	2:06p	1.5 e						
	9:25p	3:11p	3.1 f	9:11p			9:50p	1.7 f		11:42p	8:46p	1.6 f						
Wed. 10/18	12:30a	3:12a	1.7e	2:54a	12:01a	1.9 f	12:52a	3:50a	1.9 e	5:34a	2:04a	1.4 e						
	6:29a	9:33a	3.7 f	9:17a	6:29a	1.6e	6:56a	10:06a	1.9 f	12:15p	9:27a	1.7 f						
	12:35p	3:45p	2.5 e	3:27p	12:23p	2.4 f	1:20p	4:28p	2.1e	6:04p	2:41p	1.5 e						
	7:38p	10:16p	3.3 f	10:01p	7:00p	1.8e	7:37p	10:34p	1.8 f	9:37p	1:16p	1.4 e						
Thu. 10/19	1:24a	4:04a	1.6e	3:44a	12:50a	1.8 f	1:42a	4:30a	1.8 e	12:32a	2:50a	1.4 e						
	7:10a	10:16a	3.7 f	9:48a	7:02a	1.5e	7:31a	10:24a	1.8 f	6:12a	9:52a	1.6 f						
	1:12p	4:28p	2.6 e	3:58p	12:51p	2.3 f	1:51p	5:03p	2.2e	12:50p	3:13p	1.5 e						
	8:25p	11:05p	3.4 f	10:47p	7:34p	1.8e	8:21p	11:14p	1.7 f	6:44p	10:22p	1.5 f						
Fri. 10/20	2:18a	4:55a	1.5e	4:34a	1:37a	1.8 f	2:31a	5:09a	1.6 e	1:20a	3:35a	1.3 e</						

GOLDEN GATE

BENICIA BRIDGE

RICHMOND

OAKLAND

SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots		Time	Time	Knots		Time	Time	Knots		Time	Time	Knots		
Fri.	12:17a	4:33a	2.2 f	4:12a	8:05a	1.5 f	1:41a	4:45a	1.3 f	7:25a	3:35a	1.2 f					
10/27	8:47a	10:46a	0.7e	11:25a	1:44p	0.7e	8:53a	11:11a	0.7e	12:37p	9:40a	0.9e					
	12:43p	4:06p	1.1 f	3:49p	6:26p	1.3 f	1:51p	4:12p	1.0 f	6:11p	3:15p	1.1 f					
	6:16p	9:21p	1.1e	9:20p			7:01p	10:31p	1.6e		8:51p	1.1e					
Sat.	1:11a	5:28a	2.2 f	5:05a	12:39a	1.6e	2:35a	5:46a	1.3 f	12:15a	4:43a	1.2 f					
10/28	9:32a	11:41a	0.9e	12:14p	8:56a	1.7 f	9:44a	12:19p	0.8e	8:17a	10:37a	0.9e					
	2:02p	5:08p	1.1 f	5:01p	2:45p	0.9e	2:59p	5:15p	1.0 f	1:37p	4:15p	1.1 f					
	7:35p	10:59p	1.0e	10:32p	7:36p	1.2 f	8:14p	11:35p	1.6e	7:21p	9:52p	1.1e					
Sun.	2:11a	6:20a	2.4 f	5:55a	1:50a	1.6e	3:27a	6:35a	1.4 f	1:25a	5:42a	1.3 f					
10/29	10:07a	12:31p	1.1e	12:53p	9:37a	1.8 f	10:27a	1:12p	1.1e	9:05a	11:27a	1.0e					
	3:18p	6:14p	1.3 f	6:09p	3:39p	1.1e	3:59p	6:18p	1.1 f	2:31p	5:18p	1.2 f					
	8:58p			11:41p	8:48p	1.3 f	9:26p			8:29p	10:54p	1.1e					
Mon.	3:07a	12:17a	1.1e	6:39a	2:53a	1.6e	4:13a	12:35a	1.7e	2:26a	6:28a	1.4 f					
10/30	10:36a	7:06a	2.6 f	1:25p	10:09a	1.9 f	11:03a	7:13a	1.5 f	9:47a	12:08p	1.1e					
	4:21p	1:14p	1.5e	7:08p	4:26p	1.3e	4:52p	1:53p	1.3e	3:21p	6:18p	1.3 f					
	10:07p	7:15p	1.6 f		9:53p	1.5 f	10:30p	7:18p	1.2 f	9:30p	11:53p	1.2e					
Tue.	3:56a	1:10a	1.3e	12:42a	3:46a	1.7e	4:54a	1:29a	1.7e	3:18a	7:08a	1.5 f					
10/31	11:04a	7:48a	2.9 f	7:19a	10:34a	2.0 f	11:35a	7:49a	1.7 f	10:25a	12:46p	1.3e					
	5:15p	1:52p	1.8e	1:52p	5:06p	1.5e	5:41p	2:29p	1.6e	4:06p	7:15p	1.4 f					
	11:05p	8:09p	2.1 f	8:01p	10:48p	1.7 f	11:29p	8:13p	1.4 f	10:27p							
Wed.	4:41a	1:54a	1.4e	1:39a	4:33a	1.6e	5:34a	2:19a	1.7e	4:06a	12:47a	1.3e					
11/1	11:32a	8:29a	3.2 f	7:55a	11:01a	2.2 f	12:05p	8:26a	1.8 f	11:02a	7:46a	1.5 f					
	6:03p	2:26p	2.2e	2:16p	5:36p	1.7e	6:27p	3:05p	1.9e	4:49p	1:23p	1.4e					
	11:58p	8:59p	2.5 f	8:50p	11:38p	1.9 f		9:06p	1.6 f	11:21p	8:10p	1.4 f					
Thu.	5:26a	2:36a	1.5e	2:34a	5:19a	1.6e	12:25a	3:06a	1.7e	4:51a	1:38a	1.4e					
11/2	12:03p	9:10a	3.4 f	8:30a	11:31a	2.3 f	6:11a	9:04a	1.9 f	11:37a	8:24a	1.6 f					
	6:49p	2:57p	2.6e	2:41p	5:56p	1.9e	12:35p	3:42p	2.2e	5:30p	2:01p	1.6e					
	9:47p	2.9 f		9:38p			7:14p	9:56p	1.8 f		9:05p	1.5 f					
Fri.	12:49a	3:21a	1.5e	3:29a	12:27a	2.0 f	1:21a	3:54a	1.6e	12:14a	2:28a	1.4e					
11/3	6:09a	9:52a	3.6 f	9:04a	6:05a	1.4e	6:50a	9:44a	2.0 f	5:35a	9:05a	1.6 f					
	12:35p	3:30p	2.9e	3:09p	12:05p	2.4 f	1:06p	4:21p	2.5e	12:12p	2:41p	1.7e					
	7:32p	10:35p	3.3 f	10:27p	6:19p	2.1e	8:01p	10:46p	1.9 f	6:10p	9:59p	1.6 f					
Sat.	1:40a	4:10a	1.4e	4:25a	1:18a	2.0 f	2:17a	4:43a	1.5e	1:07a	3:19a	1.4e					
11/4	6:54a	10:35a	3.7 f	9:40a	6:53a	1.3e	7:29a	10:26a	2.1 f	6:21a	9:48a	1.7 f					
	1:11p	4:05p	3.1e	3:43p	12:44p	2.4 f	1:41p	5:04p	2.7e	12:49p	3:23p	1.8e					
	8:15p	11:22p	3.5 f	11:17p	6:51p	2.3e	8:50p	11:37p	1.9 f	6:52p	10:51p	1.6 f					
Sun.	1:32a	4:00a	1.4e	4:23a	1:10a	2.1 f	2:16a	4:34a	1.4e	1:02a	3:11a	1.3e					
11/5	6:39a	10:19a	3.6 f	9:20a	6:43a	1.1e	7:12a	10:10a	2.1 f	6:09a	9:32a	1.7 f					
	12:50p	3:43p	3.3e	3:22p	12:27p	2.5 f	1:21p	4:49p	2.8e	12:29p	3:07p	1.9e					
	7:58p	11:08p	3.7 f	11:09p	6:31p	2.4e	8:40p	11:31p	1.9 f	6:36p	10:44p	1.6 f					
Mon.	2:24a	4:50a	1.3e	5:22a	2:04a	2.0 f	3:16a	5:27a	1.2e	1:57a	4:04a	1.3e					
11/6	7:25a	11:04a	3.5 f	10:04a	7:37a	1.0e	7:58a	10:58a	2.0f	7:01a	10:19a	1.6 f					
	1:31p	4:23p	3.3e	4:07p	1:13p	2.4 f	2:06p	5:37p	2.8e	1:13p	3:53p	1.9e					
	8:41p	11:56p	3.7 f		7:17p	2.4e	9:33p			7:23p	11:39p	1.6 f					
Tue.	3:18a	5:42a	1.2e	12:03a	3:02a	2.0 f	4:17a	12:29a	1.8 f	2:55a	5:00a	1.2e					
11/7	8:15a	11:51a	3.2 f	6:23a	8:35a	0.9e	8:51a	6:23a	1.1e	7:58a	11:08a	1.6 f					
	2:16p	5:06p	3.2e	10:57a	2:04p	2.3 f	2:56p	11:50a	1.9 f	2:01p	4:43p	1.8e					
	9:25p				4:57p	8:08p	2.3e	10:29p	6:29p	2.7e	8:16p						
Wed.	4:13a	12:47a	3.6 f	12:59a	4:03a	1.9 f	5:19a	1:35a	1.8 f	3:55a	12:41a	1.6 f					
11/8	9:09a	6:42a	1.1e	7:26a	9:41a	0.9e	9:53a	7:24a	1.0e	8:59a	6:01a	1.1e					
	3:05p	12:43p	2.8 f	11:58a	2:59p	2.1 f	3:54p	12:46p	1.7 f	2:56p	12:02p	1.5 f					
Thu.	5:13a	1:41a	3.4 f	5:54p	9:09p	2.1e	11:28p	7:25p	2.5e	9:16p	5:36p	1.7e					
11/9	10:12a	7:52a	1.0e	8:30a	10:54a	0.9e	11:07a	8:33a	1.0e	10:05a	7:06a	1.1e					
	4:01p	1:40p	2.5 f	1:09p	3:59p	1.8 f	4:59p	1:49p	1.5 f	3:59p	1:02p	1.4 f					
	11:06p	6:51p	2.4e	6:58p	10:31p	1.8e		8:27p	2.3e	10:24p	6:35p	1.5e					
Fri.	6:19a	2:38a	3.3 f	2:57a	6:14a	2.0 f	12:29a	4:09a	1.7 f	5:58a	2:58a	1.6 f					
11/10	11:34a	9:01a	1.1e	9:33a	12:08p	1.0e	7:23a	9:50a	1.1e	11:14a	8:15a	1.1e					
	5:08p	2:43p	2.1 f	2:27p	5:09p	1.6 f	12:28p	3:00p	1.3 f	5:10p	2:06p	1.3 f					
	8:06p	1.9e		8:13p			6:13p	9:38p	2.0e	11:36p	7:40p	1.4e					
Sat.	12:09a	3:38a	3.2 f	3:54a	12:33a	1.7e	1:28a	5:14a	1.8 f	6:56a	4:05a	1.6 f					
11/11	7:22a	10:08a	1.3e	10:30a	7:16a	2.1 f	8:19a	11:06a	1.3e	12:22p	9:23a	1.2e					
	1:12p	3:51p	2.0 f	3:50p	1:19p	1.2e	1:46p	4:18p	1.2 f	6:24p	3:16p	1.3 f					
	6:30p	9:43p	1.6e	9:34p	6:31p	1.4 f	7:30p	10:53p	1.9e	8:48p	5:48p	1.3e					
Sun.	1:15a	4:39a	3.2 f	4:48a	1:47a	1.6e	2:23a	6:09a	1.9 f	12:44a	5:03a	1.7 f					
11/12	8:17a	11:13a	1.6e	11:22a	8:11a	2.2 f	9:10a	12:09p	1.6e	7:49a	10:24a	1.3e					
	2:37p	5:05p	2.0 f	5:09p	2:24p	1.5e	2:57p	5:45p	1.3 f	1:25p	4:32p	1.3 f					
	7:59p	11:04p	1.5e	10:51p	8:00p	1.4 f	8:43p			7:35p	9:59p	1.2e					
Mon.	2:16a	5:38a	3.3 f	5:37a	2:46a	1.6e	3:13a	12:01a	1.8e	1:42a	5:53a	1.7 f					
11/13	9:05a	12:09p	1.9e	12:07p	8:59a	2.4 f	9:55a	6:56a	1.9 f	8:38a	11:16a	1.4e					
	3:47p	6:16p	2.3 f	6:20p	3:24p	1.7e	3:59p	1:02p	1.9e	2:23p	5:44p	1.4 f					
	9:17p			11:57p	9:12p	1.6 f	9:50p	7:03p	1.4 f	8:39p	11:05p	1.2e					
Tue.	3:10a	12:05a	1.5e	6:20a	3:36a	1.6e	3:57a	12:57a	1.7e	2:34a							

GOLDEN GATE
BENICIA BRIDGE
RICHMOND
OAKLAND

	SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT		
	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots	Time	Time	Knots
Sun. 11/19	2:01a	4:17a	1.1e	4:32a	1:25a	1.7 f	2:19a	4:35a	1.0e	12:58a	3:07a	1.1e	6:40a	10:07a	3.0 f	9:07a	9:55a	0.8e
	6:40a	10:07a	3.0 f	9:07a	6:55a	0.8e	7:06a	9:51a	1.6 f	6:03a	9:06a	1.4 f	12:48p	4:00p	2.4e	3:12p	12:11p	2.0 f
	12:48p	4:00p	2.4e	11:02p	6:25p	2.0e	1:07p	4:35p	2.3e	12:11p	2:43p	1.5e	8:27p	11:15p	3.2 f	11:20p	12:10a	1.6 f
	8:27p	11:15p	3.2 f	5:24a	2:10a	1.6 f	8:27p	11:32p	1.6 f	6:24p	10:35p	1.5 f	2:51a	5:04a	1.0e	3:07a	5:16a	0.9e
Mon. 11/20	7:16a	10:46a	2.7 f	9:42a	7:37a	0.7e	7:44a	10:29a	1.6 f	1:43a	3:50a	1.0e	1:20p	4:23p	2.3e	3:43p	12:47p	2.0 f
	1:20p	4:23p	2.3e	11:38p	6:51p	2.0e	1:34p	5:06p	2.3e	12:40p	3:19p	1.5e	8:58p	11:55p	3.0 f	9:04p	9:40p	1.4 f
	8:58p	11:55p	3.0 f	6:15a	2:53a	1.6 f	3:55a	12:01a	1.6 f	2:28a	4:34a	1.0e	7:53a	11:25a	2.4 f	8:24a	5:58a	0.8e
	7:53a	11:25a	2.4 f	10:24a	8:22a	0.6e	2:05p	11:11a	1.5 f	1:13p	3:58p	1.5e	1:52p	4:49p	2.2e	4:18p	1:28p	1.9 f
Tue. 11/21	9:23p						9:41p	5:41p	2.3e	7:17p	11:33p	1.4 f	4:40a			7:27p	2:1e	
	4:42a	12:36a	2.8 f	12:14a	3:34a	1.6 f	10:19p	6:20p	2.2e	7:50p			8:31a	6:36a	0.8e	7:06a	9:05a	0.9e
	8:31a	6:36a	0.8e	7:06a	9:11a	0.6e	9:09a	6:41a	0.8e	8:16a	11:06a	1.3 f	2:25p	12:05p	2.0 f	11:12a	2:12p	1.8 f
	2:25p	12:05p	2.0 f	11:12a	2:12p	1.8 f	2:41p	11:56a	1.3 f	1:51p	4:40p	1.5e	9:44p	5:19p	2.0e	4:58p	8:10p	2.1e
Wed. 11/22	5:16a	1:18a	2.7 f	12:51a	4:15a	1.6 f	5:29a	1:14a	1.5 f	3:58a	12:08a	1.3 f	9:13a	7:25a	0.7e	10:00a	7:27a	0.7e
	9:13a	7:25a	0.7e	7:57a	10:06a	0.6e	3:23p	12:45p	1.2 f	2:35p	11:53a	1.2 f	3:02p	12:47p	1.7 f	10:07p	3:01p	1.6 f
	10:10p	5:56p	1.8e	5:44p	9:00p	2.0e	11:01p	7:04p	2.1e	8:32p	5:26p	1.4e	6:08a	2:03a	2.5 f	8:48a	11:05a	1.6 f
	10:02a	8:16a	0.7e	1:32a	4:57a	1.6 f	6:17a	1:58a	1.5 f	4:46a	12:50a	1.3 f	3:45p	1:36p	1.4 f	10:10p	5:56p	1.8e
Sat. 11/25	10:47p	6:43p	1.6e	6:36p	9:56p	1.9e	11:46p	7:53p	1.9e	9:23p	6:19p	1.3e	6:58a	2:50a	2.4 f	7:04a	2:45a	1.5 f
	11:02a	9:09a	0.7e	9:37a	12:05p	0.7e	12:11p	9:16a	0.8e	10:52a	7:46a	0.9e	4:39p	2:30p	1.3 f	11:34p	7:48p	1.4e
	5:50p	3:32p	1.2 f	3:19p	4:53p	1.3 f	5:13p	2:36p	1.0 f	4:29p	1:39p	1.1 f	9:16p	1:2e		3:31p	6:01p	1.2 f
	9:16p	1:2e		8:50p			6:25p	9:47p	1.7e	11:28p	8:18p	1.1e	7:40a	3:39a	2.4 f	3:02a	6:29a	1.7 f
Mon. 11/27	12:26a	4:29a	2.6 f	3:49a	12:03a	1.6e	1:25a	4:23a	1.6 f	7:11a	3:27a	1.3 f	8:16a	10:53a	1.2e	10:57a	7:13a	1.8 f
	1:39p	4:38p	1.3 f	4:42p	1:56p	1.1e	2:27p	4:42p	1.0 f	12:46p	9:27a	1.0e	7:17p	10:37p	1.2e	10:06a	9:05a	0.9e
	1:18a	5:19a	2.8 f	4:35a	1:05a	1.6e	2:13a	5:10a	1.7 f	12:33a	4:21a	1.4 f	8:47a	11:39a	1.6e	11:28a	7:53a	1.2e
	8:47a	11:39a	1.6e	11:28a	7:53a	1.9 f	9:08a	12:04p	1.5e	7:54a	10:14a	1.2e	2:52p	5:44p	1.6 f	11:36p	8:28p	1.1e
Wed. 11/29	8:36p	11:36p	1.3e	8:29p	11:20p	1.3 f	9:00p	11:49p	1.5e	8:04p	10:23p	1.1e	2:06a	6:06a	3.1 f	5:18a	2:03a	1.5 f
	9:18a	12:18p	2.0e	11:56a	8:31a	2.1 f	9:43a	12:48p	1.8e	8:36a	11:00a	1.3e	3:53p	6:43p	2.0 f	6:45p	9:32p	1.6 f
	9:43p						10:10p			9:09p	11:23p	1.2e	7:25a	12:25a	1.3e	3:43p	6:32p	1.6 f
	9:51a	6:52a	3.3 f	5:59a	9:10a	2.2 f	10:17a	6:42a	1.9 f	9:16a	11:44a	1.5e	4:45p	12:52p	2.4e	10:42p	7:37p	2.5 f
Fri. 12/1	3:40a	1:10a	1.3e	1:22a	3:48a	1.2e	4:27a	1:40a	1.4e	3:19a	12:19a	1.2e	10:26a	7:37a	3.5 f	6:38a	9:49a	2.4 f
	5:34p	1:24p	2.8e	12:56p	4:10p	2.1e	6:01p	2:13p	2.5e	9:56a	6:46a	1.6 f	11:36p	8:28p	2.9 f	8:29p	11:20p	1.9 f
	4:29a	1:56a	1.3e	2:22a	4:40a	1.1e	12:17a	2:34a	1.3e	4:11a	1:14a	1.2e	11:03a	8:22a	3.6 f	7:19a	10:31a	2.5 f
	6:20p	1:58p	3.1e	1:31p	4:45p	2.3e	11:32a	2:58p	2.8e	4:54p	1:12p	1.9e	9:17p	3:33f		9:19p	6:51p	1.9 f
Sun. 12/3	12:29a	2:47a	1.2e	3:21a	12:12a	2.0 f	1:17a	3:28a	1.2e	12:02a	2:08a	1.3e	5:20a	9:09a	3.6 f	8:02a	5:34a	1.7 f
	11:44a	2:37p	3.2e	2:13p	11:15a	2.5 f	12:14p	3:44p	2.9e	11:21a	1:59p	2.0e	7:05p	10:05p	3.6 f	10:09p	11:34p	2.0 f
	1:20a	3:43a	1.2e	4:20a	1:04a	2.1 f	2:15a	4:23a	1.2e	12:57a	3:02a	1.3e	6:13a	9:56a	3.6 f	8:50a	6:30a	0.9e
	12:27p	3:21p	3.3e	2:59p	12:03p	2.5 f	12:59p	4:33p	3.0e	12:07p	2:46p	2.0e	7:49p	10:52p	3.8 f	11:00p	6:14p	2.5e
Tue. 12/5	2:12a	4:38a	1.2e	5:16a	1:58a	2.1 f	3:12a	5:18a	1.1e	1:50a	3:55a	1.3e	7:07a	10:44a	3.5 f	8:29p	11:20p	1.9 f
	1:12p	4:07p	3.2e	3:49p	12:54p	2.5 f	1:49p	5:22p	3.0e	6:54a	10:03a	1.6 f	8:33p	11:39p	3.8 f	9:20p	7:07p	2.5 f
	3:03a	5:31a	1.2e	6:12a	2:51a	2.2 f	4:07a	12:29a	2.0 f	2:43a	4:50a	1.2e	8:02a	11:33a	3.2 f	4:43p	6:14a	1.1e
	2:01p	4:54p	3.0e	4:43p	1:48p	2.3 f	2:42p	11:33a	1.9 f	1:46p	4:25p	1.9e	9:17p	8:04p	2.3e	10:11p	6:13p	2.8e
Thu. 12/7	3:55a	12:28a	3.7 f	12:40a	3:45a	2.2 f	5:01a	1:27a	1.9 f	3:36a	12:29a	1.8 f	9:01a	6:29a	1.2e	2:53p	12:26p	2.9 f
	10:03p	5:46p	2.7e	5:41p	9:10p	2.1e	9:44a	7:12a	1.1e	8:48a	5:46a	1.2e	4:50a	1:20a	3.6 f	11:51a	2:45p	2.1 f
	10:06a	7:32a	1.2e	8:04a	10:40a	1.1e	10:56a	8:15a	1.2e	9:48a	6:45a	1.2e	3:50p	1:23p	2.5 f	10:2p	3:46p	1.4 f
	10:52p	6:47p	2.3e	6:45p	10:30p	1.9e	11:55p	8:04p	2.3e	10:02p	2:43p	1.4 f	5:48a	2:14a	3.4 f	6:45p	9:37a	1.2e
Sat. 12/9	11:28a	8:37a	1.2e	9:00a	11:50a	1.2e	12:13p	9:25a	1.3e	10:51a	7:46a	1.2e	4:57p	2:25p	2.2 f	11:45p	8:08p	1.9e
	11:45p	8:08p	1.9e	7:57p	11:54p	1.7e	5:52p	2:41p	1.3 f	11:04p	7:19p	1.3e	6:48a	3:10a	3.3 f	8:12a	6:34a	2.2 f
	6:48a	3:10a	3.3 f	3:12a	6:34a	2.2 f	12:47a	4:23a	1.8 f	6:21a	3:18a	1.6 f	1:01p	9:42a	1.4e	9:56a	12:59p	1.4e
	6:18p	3:33p	2.0 f	3:41p	6:22p	1.3 f	7:41a	10:37a	1.5e	11:56a	8:47a	1.2e	9:29p	1:29p	1.6e	9:15p	7:53p	1.3 f
Mon. 12/11	12:40a	4:07a	3.2 f	4:02a	1:04a	1.6e	1:39a	5:16a	1.8 f	12:05a	4:14a	1.5 f	7:43a	10:45a	1.6e	10:47a	7:29a	2.3 f
	2:23p	4:46p	1.9 f	5:03p	2:05p	1.6e	8:30a	11:42a	1.7e	7:12a	9:46a	1.2e	7:45p	10:39p	1.4e	8:23p	11:27p	1.5e
	7:45p	10:39p	1.4e	10:33p	7:53p	1.3 f	8:23p	11:27p	1.5e	7:17p	9:38p	1.1e						

GOLDEN GATE

BENICIA BRIDGE

RICHMOND

OAKLAND

SLACK			CURRENT			SLACK			CURRENT			SLACK			CURRENT			
	Time	Time	Knots		Time	Time	Knots		Time	Time	Knots		Time	Time	Knots			
Tue.	1:35a	5:04a	3.2 f	4:50a	2:05a	1.4 e	2:29a	6:02a	1.8 f	1:03a	5:05a	1.5 f						
12/12	8:33a	11:43a	1.9 e	11:32a	8:18a	2.3 f	9:16a	12:38p	2.0 e	8:00a	10:41a	1.3 e						
	3:32p	6:01p	2.1 f	6:16p	3:07p	1.8 e	3:47p	6:58p	1.3 f	2:00p	5:37p	1.3 f						
	9:04p	11:39p	1.3 e	11:46p	9:07p	1.4 f	9:36p			8:24p	10:48p	1.1 e						
Wed.	2:25a	5:58a	3.3 f	5:35a	3:00a	1.3 e	3:16a	12:30a	1.4 e	1:56a	5:47a	1.5 f						
12/13	9:17a	12:32p	2.1 e	12:11p	9:01a	2.3 f	9:57a	6:40a	1.8 f	8:45a	11:26a	1.4 e						
	4:31p	7:04p	2.4 f	7:17p	4:04p	2.0 e	4:43p	1:27p	2.2 e	2:56p	6:42p	1.4 f						
	10:11p				10:06p	1.6 f	10:42p	8:01p	1.5 f	9:25p	11:48p	1.1 e						
Thu.	3:12a	12:31a	1.2 e	12:52a	3:50a	1.1 e	4:00a	1:24a	1.3 e	2:46a	6:22a	1.5 f						
12/14	9:57a	6:47a	3.3 f	6:16a	9:37a	2.2 f	10:35a	7:11a	1.7 f	9:25a	12:03p	1.4 e						
	5:23p	1:13p	2.3 e	12:45p	4:54p	2.1 e	5:33p	2:10p	2.3 e	3:45p	7:39p	1.6 f						
	11:09p	7:58p	2.7 f	8:09p	10:59p	1.7 f	11:41p	8:55p	1.6 f	10:21p								
Fri.	3:58a	1:19a	1.2 e	1:52a	4:38a	1.0 e	4:43a	2:14a	1.2 e	3:34a	12:41a	1.1 e						
12/15	10:35a	7:33a	3.2 f	6:53a	10:08a	2.1 f	11:09a	7:41a	1.7 f	10:03a	6:54a	1.4 f						
	6:09p	1:50p	2.4 e	1:15p	5:37p	2.1 e	6:17p	2:47p	2.4 e	4:28p	12:35p	1.4 e						
	8:47p	2.9 f		8:55p	11:47p	1.8 f		9:43p	1.7 f	11:12p	8:29p	1.6 f						
Sat.	12:02a	2:08a	1.1 e	2:49a	5:22a	0.8 e	12:35a	3:00a	1.1 e	4:20a	1:29a	1.1 e						
12/16	4:42a	8:16a	3.1 f	7:28a	10:38a	2.1 f	5:25a	8:15a	1.7 f	10:38a	7:27a	1.4 f						
	11:11a	2:25p	2.3 e	1:43p	6:10p	2.0 e	11:41a	3:19p	2.4 e	5:05p	1:07p	1.4 e						
	6:51p	9:31p	3.0 f	9:35p			6:58p	10:27p	1.7 f		9:14p	1.6 f						
Sun.	12:52a	2:58a	1.0 e	3:43a	12:33a	1.8 f	1:25a	3:44a	1.0 e	12:00a	2:14a	1.1 e						
12/17	5:25a	8:59a	2.9 f	8:04a	6:05a	0.7 e	6:05a	8:50a	1.6 f	5:05a	8:04a	1.3 f						
	11:46a	2:59p	2.3 e	2:12p	11:09a	2.0 f	12:11p	3:46p	2.4 e	11:11a	1:40p	1.5 e						
	7:29p	10:13p	3.1 f	10:12p	6:21p	2.0 e	7:35p	11:05p	1.7 f	5:37p	9:53p	1.6 f						
Mon.	1:40a	3:49a	0.9 e	4:32a	1:17a	1.8 f	2:12a	4:25a	0.9 e	12:44a	2:57a	1.1 e						
12/18	6:07a	9:40a	2.7 f	8:41a	6:46a	0.7 e	6:46a	9:28a	1.6 f	5:48a	8:42a	1.3 f						
	12:20p	3:30p	2.2 e	2:43p	11:44a	2.0 f	12:41p	4:13p	2.4 e	11:43a	2:16p	1.5 e						
	8:03p	10:51p	3.0 f	10:45p	6:08p	2.0 e	8:09p	11:34p	1.7 f	6:04p	10:24p	1.6 f						
Tue.	2:26a	4:36a	0.9 e	5:17a	1:56a	1.8 f	2:55a	5:03a	0.9 e	1:26a	3:36a	1.1 e						
12/19	6:46a	10:20a	2.6 f	9:21a	7:27a	0.6 e	7:26a	10:08a	1.5 f	6:30a	9:22a	1.3 f						
	12:53p	3:59p	2.2 e	3:17p	12:23p	1.9 f	1:11p	4:44p	2.4 e	12:15p	2:54p	1.5 e						
	8:32p	11:28p	3.0 f	11:15p	6:32p	2.1 e	8:42p	11:49p	1.6 f	6:29p	10:48p	1.5 f						
Wed.	3:09a	5:20a	0.9 e	5:58a	2:31a	1.8 f	3:35a	5:40a	0.8 e	2:05a	4:13a	1.1 e						
12/20	7:25a	10:59a	2.4 f	10:06a	8:08a	0.6 e	8:06a	10:49a	1.5 f	7:11a	10:02a	1.3 f						
	1:27p	4:29p	2.1 e	3:55p	1:05p	1.9 f	1:44p	5:18p	2.4 e	12:50p	3:34p	1.6 e						
	8:57p			11:45p	7:09p	2.2 e	9:14p				6:56p	11:10p	1.5 f					
Thu.	3:49a	12:05a	2.9 f	6:37a	3:00a	1.8 f	4:13a	12:09a	1.6 f	2:43a	4:50a	1.0 e						
12/21	8:04a	6:02a	0.9 e	10:54a	8:49a	0.7 e	8:48a	6:17a	0.8 e	7:50a	10:43a	1.3 f						
	2:03p	11:38a	2.2 f	4:37p	1:50p	1.8 f	2:20p	11:33a	1.4 f	1:28p	4:16p	1.6 e						
	9:19p	5:03p	2.1 e		7:52p	2.2 e	9:46p	5:55p	2.3 e	7:28p	11:36p	1.4 f						
Fri.	4:28a	12:44a	2.8 f	12:16a	3:26a	1.8 f	4:50a	12:39a	1.6 f	3:20a	5:28a	1.0 e						
12/22	8:45a	6:46a	0.8 e	7:15a	9:33a	0.7 e	9:33a	6:55a	0.9 e	8:29a	11:26a	1.3 f						
	2:42p	12:20p	2.0 f	11:46a	2:38p	1.7 f	3:00p	12:19p	1.3 f	2:10p	5:01p	1.5 e						
	9:47p	5:41p	2.0 e	5:21p	8:38p	2.1 e	10:20p	6:36p	2.2 e	8:06p								
Sat.	5:07a	1:25a	2.7 f	12:50a	3:57a	1.9 f	5:27a	1:16a	1.7 f	3:58a	12:10a	1.4 f						
12/23	9:32a	7:32a	0.8 e	7:54a	10:19a	0.8 e	10:26a	7:37a	0.9 e	9:10a	6:09a	1.0 e						
	3:26p	1:07p	1.8 f	12:43p	3:29p	1.5 f	3:46p	1:08p	1.2 f	2:58p	12:12p	1.2 f						
	10:22p	6:27p	1.8 e	6:11p	9:29p	2.0 e	10:58p	7:21p	2.1 e	8:50p	5:51p	1.4 e						
Sun.	5:48a	2:09a	2.7 f	1:28a	4:33a	1.9 f	6:06a	1:58a	1.7 f	4:39a	12:51a	1.4 f						
12/24	10:28a	8:21a	0.9 e	8:33a	11:08a	0.9 e	11:28a	8:24a	1.0 e	9:56a	6:54a	1.0 e						
	4:18p	2:01p	1.6 f	1:47p	4:25p	1.3 f	4:40p	2:03p	1.1 f	3:55p	1:03p	1.2 f						
	11:03p	7:27p	1.6 e	7:09p	10:25p	1.8 e	11:41p	8:12p	1.9 e	9:42p	6:46p	1.3 e						
Mon.	6:30a	2:55a	2.7 f	2:09a	5:15a	1.9 f	6:46a	2:43a	1.7 f	5:23a	1:38a	1.4 f						
12/25	11:36a	9:12a	1.1 e	9:11a	11:58a	1.0 e	12:39p	9:17a	1.1 e	10:50a	7:42a	1.0 e						
	5:24p	3:00p	1.5 f	2:57p	5:29p	1.2 f	5:48p	3:03p	1.0 f	5:04p	1:58p	1.1 f						
	11:49p	8:43p	1.4 e	8:19p	11:25p	1.6 e		9:08p	1.6 e	10:41p	7:46p	1.2 e						
Tue.	7:11a	3:43a	2.8 f	2:52a	6:00a	2.0 f	12:27a	3:32a	1.7 f	6:11a	2:31a	1.4 f						
12/26	12:55p	10:03a	1.3 e	9:49a	12:48p	1.2 e	7:27a	10:15a	1.3 e	11:51a	8:32a	1.1 e						
	6:47p	4:05p	1.5 f	4:11p	6:45p	1.1 f	1:52p	4:08p	1.0 f	6:25p	3:03p	1.0 f						
	9:59p	1.2 e		9:38p			7:12p	10:10p	1.4 e	11:46p	8:51p	1.1 e						
Wed.	12:38a	4:34a	2.9 f	3:38a	12:27a	1.4 e	1:17a	4:22a	1.8 f	6:59a	3:27a	1.4 f						
12/27	7:51a	10:52a	1.7 e	10:25a	6:49a	2.0 f	8:10a	11:14a	1.6 e	12:55p	9:25a	1.2 e						
	2:13p	5:14p	1.7 f	5:23p	1:34p	1.4 e	2:59p	5:18p	1.1 f	7:45p	4:19p	1.1 f						
	8:12p	11:05p	1.2 e	10:56p	8:09p	1.2 f	8:40p	11:16p	1.3 e		9:57p	1.0 e						
Thu.	1:28a	5:26a	3.0 f	4:24a	1:28a	1.2 e	2:09a	5:14a	1.8 f	12:52a	4:25a	1.4 f						
12/28	8:31a	11:37a	2.1 e	11:02a	7:38a	2.1 f	8:53a	12:09p	2.0 e	7:47a	10:17a	1.4 e						
	3:21p	6:18p	2.1 f	6:28p	2:15p	1.7 e	4:00p	6:34p	1.2 f	1:57p	5:45p	1.2 f						
	9:24p			9:21p	1.4 f		10:00p			8:57p	11:03p	1.0 e						

Tide Corrections

Times with a minus sign occur *before* predictions; those with a plus sign occur *after*.

*Heights preceded by an asterisk are ratios; multiply by predicted tidal height.

	POSITION		DIFFERENCES			
	Latitude	Longitude	Time		Height	
			High Water	Low Water	High Water	Low Water
	North	West	h m	h m	ft	ft
OUTER COAST of CALIFORNIA		<i>(corrections apply to San Francisco tides)</i>				
Ano Nuevo Island	37° 06'	122° 20'	-1 24	-1 04	-0.7	-0.1
Pillar Point Harbor, Half Moon Bay	37° 30.1'	122° 28.9'	-1 04	-0 43	*0.95	*0.97
Southeast Farallon Island	37° 42'	123° 00'	-0 39	-0 19	-0.3	0.0
San Francisco Bar	37° 46'	122° 38'	-0 35	-0 31	-0.2	0.0
Ocean Beach, outer coast	37° 46'	122° 31'	-0 49	-0 35	+0.1	0.0
SAN FRANCISCO BAY						
Point Bonita, Bonita Cove	37° 49'	122° 32'	-0 17	-0 10	+0.3	0.0
San Francisco (Golden Gate)	37° 48.4'	122° 27.9'			daily predictions	
Alcatraz Island	37° 50'	122° 25'	+0 14	+0 18	0.0	0.0
San Francisco, North Point, Pier 41	37° 49'	122° 25'	+0 13	+0 11	+0.2	0.0
Rincon Point, Pier 22 1/2	37° 47'	122° 23'	+0 23	+0 25	+0.4	0.0
Yerba Buena Island	37° 48.6'	122° 21.6'	+0 25	+0 33	*1.06	*0.99
Oakland, Matson Wharf	37° 49'	122° 20'	+0 28	+0 36	+0.3	0.0
Oakland Middle Harbor	37° 48.3'	122° 20.3'	+0 21	+0 31	*1.07	*0.96
Oakland Pier	37° 48'	122° 20'	+0 33	+0 48	+0.2	0.0
Oakland Inner Harbor	37° 47.7'	122° 16.9'	+0 24	+0 31	*1.12	*0.99
Alameda Naval Air Station	37° 47.6'	122° 18.9'	+0 24	+0 33	*1.11	*1.00
Alameda	37° 46.3'	122° 17.9'	+0 29	+0 39	*1.11	*0.99
Oakland Harbor, Grove Street	37° 48'	122° 17'	+0 33	+0 42	+0.4	0.0
Oakland Harbor, Park Street Bridge	37° 46.3'	122° 14.1'	+0 24	+0 32	*1.13	*0.98
San Leandro Channel, San Leandro Bay	37° 44.9'	122° 14.1'	+0 42	+0 52	*1.16	*0.98
Oakland Airport	37° 43.9'	122° 12.5'	+0 40	+0 45	*1.15	*0.96
Potrero Point	37° 46'	122° 23'	+0 33	+0 46	+0.5	0.0
Hunters Point	37° 43.8'	122° 21.4'	+0 28	+0 43	*1.18	*1.00
San Leandro Marina	37° 41.7'	122° 11.5'	+0 54	+1 23	*1.28	*1.01
Roberts Landings, 1.3 miles west of	37° 40'	122° 12'	+0 52	+1 28	+1.4	+0.1
South San Francisco	37° 40'	122° 23'	+0 38	+0 56	+1.2	0.0
Oyster Point Marina	37° 39.9'	122° 22.6'	+0 41	+1 00	*1.23	*1.00
Point San Bruno	37° 39'	122° 23'	+0 38	+1 10	+1.1	+0.1
Seaplane Harbor	37° 38'	122° 23'	+0 42	+1 03	+1.4	0.0
Coyote Point Marina	37° 35.5'	122° 18.8'	+0 42	+1 08	*1.29	*1.01
San Mateo Bridge (west end)	37° 34.8'	122° 15.2'	+0 44	+1 11	*1.36	*1.04
San Mateo Bridge (east end)	37° 36'	122° 11'	+0 48	+1 19	+1.8	0.0
Alameda Creek	37° 35.7'	122° 08.7'	+0 57	+2 25	*1.05	*0.27
Coyote Hills Slough entrance	37° 33.8'	122° 07.7'	+0 52	+2 21	*1.17	*0.45
Bay Slough, west end	37° 33.1'	122° 14.6'	+0 48	+1 28	*1.35	*1.00
Bay Slough, east end	37° 32.7'	122° 13.3'	+0 49	+1 52	*1.27	*0.77
Redwood Creek Marker 8	37° 32'	122° 12'	+0 53	+1 28	*1.41	*1.05
Redwood Creek entrance (inside)	37° 31'	122° 12'	+1 06	+1 38	+2.1	+0.1
South Bay Wreck	37° 33'	122° 10'	+1 02	+1 37	+2.2	+0.1
Corkscrew Slough	37° 30'	122° 13'	+1 03	+1 42	+2.2	+0.1

Tide Corrections

Times with a minus sign occur *before* predictions; those with a plus sign occur *after*.

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	POSITION		DIFFERENCES			
	Latitude	Longitude	Time		Height	
			High Water	Low Water	High Water	Low Water
	North	West	h m	h m	ft	ft
SAN FRANCISCO BAY, cont.			<i>(corrections apply to San Francisco tides)</i>			
Redwood City, Wharf 5	37° 30.4'	122° 12.6'	+0 48	+1 15	*1.45	*1.05
West Point Slough	37° 30.3'	122° 11.5'	+0 56	+1 30	*1.44	*1.04
Smith Slough	37° 30'	122° 14'	+1 15	+1 58	+2.1	0.0
Newark Slough	37° 31'	122° 05'	+1 11	+1 58	+2.6	+0.1
Dumbarton Highway Bridge	37° 30.4'	122° 06.9'	+0 47	+1 14	*1.53	*1.10
Ravenswood Slough ¹	37° 29.8'	122° 10.3'	+0 58	---	--	--
Granite Rock, Redwood Creek	37° 29.7'	122° 12.8'	+0 55	+1 31	*1.43	*1.04
Palo Alto Marker 8 ²	37° 28.1'	122° 05.8'	+1 01	---	--	--
Palo Alto Yacht Harbor	37° 27.5'	122° 06.3'	+0 59	+2 14	*1.34	*0.68
Mowry Slough	37° 30'	122° 02'	+1 12	+2 07	+2.6	0.0
Calaveras Point, west of	37° 28'	122° 04'	+1 05	+1 49	+2.8	+0.1
Mud Slough railroad bridge ²	37° 28.1'	121° 59.2'	+1 12	---	--	--
Guadalupe Slough	37° 27.2'	122° 02.0'	+1 06	---	--	--
Upper Guadalupe Slough	37° 26.1'	122° 00.4'	+1 14	+2 13	*1.66	*1.13
Coyote Creek, Alviso Slough	37° 27.8'	122° 01.4'	+0 59	+1 49	*1.61	*1.09
Gold Street Bridge, Alviso Slough	37° 25.4'	121° 58.5'	+1 03	+2 21	*1.67	*0.96
Coyote Creek, Tributary no. 1	37° 27'	121° 58'	+1 21	+2 45	+2.6	-0.3
Coyote Creek, Tributary no. 2 ²	37° 27.6'	121° 57.2'	+1 18	---	--	--
Coyote Creek, Tributary no. 3 ²	37° 27.7'	121° 57.1'	+1 15	---	--	--
Sausalito	37° 50.8'	122° 28.6'	+0 10	+0 14	*0.97	*1.00
Sausalito, Corps of Engineers Dock	37° 51.9'	122° 29.6'	+0 10	+0 21	*0.98	*1.00
Angel Island (west side)	37° 52'	122° 27'	+0 13	+0 21	-0.2	0.0
Angel Island, East Garrison	37° 51.8'	122° 25.1'	+0 16	+0 20	*1.02	*1.04
Point Chauncey	37° 53.5'	122° 26.6'	+0 28	+0 32	*0.98	*0.96
Berkeley	37° 52'	122° 18'	+0 21	+0 38	+0.1	0.0
Point Isabel	37° 54'	122° 19'	+0 23	+0 33	+0.1	0.0
Richmond Inner Harbor	37° 54.6'	122° 21.5'	+0 16	+0 30	*1.04	*0.98
Chevron Oil Company Pier, Richmond	37° 55.7'	122° 24.0'	+0 24	+0 38	*1.04	*0.98
Point Orient	37° 57.5'	122° 25.5'	+0 50	+0 52	*1.03	*0.96
Corte Madera Creek	37° 56.6'	122° 30.8'	+0 36	+0 51	*0.99	*0.95
Point San Quintin	37° 56.7'	122° 28.4'	+0 42	+0 50	*0.99	*0.93
SAN PABLO BAY						
Point San Pedro	37° 59.6'	122° 26.8'	+1 02	+1 07	*1.01	*0.92
Pinole Point	38° 00.9'	122° 21.7'	+1 16	+1 25	*1.03	*0.89
Hercules, Refugio Landing	38° 01.4'	122° 17.5'	+1 15	+1 39	*1.05	*0.85
Petaluma River entrance	38° 06.7'	122° 29.9'	+1 23	+2 08	*1.06	*0.86
Lakeville, Petaluma River	38° 12'	122° 34'	+1 59	+2 50	*1.11	*0.81
Upper drawbridge, Petaluma River	38° 13.7'	122° 36.8'	+2 11	+2 59	*1.15	*0.82
Gallinas, Gallinas Creek	38° 00.9'	122° 30.2'	+1 18	+1 25	*1.02	*0.89
Hog Island, San Antonio Creek	38° 09.4'	122° 33.0'	+1 47	+2 36	*1.07	*0.79
Sonoma Creek Entrance	38° 09.4'	122° 24.4'	+1 22	+2 46	*0.93	*0.59
Wingo, Sonoma Creek	38° 13'	122° 26'	+2 12	+3 11	+0.1	-0.3

Tide Corrections

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	POSITION		DIFFERENCES			
	Latitude	Longitude	Time		Height	
			High Water	Low Water	High Water	Low Water
	North	West	h m	h m	ft	ft
CARQUINEZ STRAIT			<i>(corrections apply to San Francisco tides)</i>			
Mare Island	38° 04.2'	122° 15.0'	+1 34	+1 57	*0.99	*0.84
Vallejo, Mare Island Strait	38° 06.7'	122° 16.4'	+1 47	+2 12	*1.02	*0.84
Edgerly Island, Napa River	38° 11.6'	122° 18.8'	+2 02	+2 29	*1.06	*0.76
Brazos Drawbridge, Napa River	38° 12.5'	122° 18.2'	+2 02	+2 29	*1.14	*0.86
Napa, Napa River	38° 17.9'	122° 16.8'	+2 05	+2 37	*1.22	*0.90
Selby	38° 03'	122° 15'	+1 29	+2 04	+0.6	0.0
			<i>(corrections apply to Port Chicago tides)</i>			
Crockett	38° 03.5'	122° 13.4'	-0 58	-1 05	*1.22	*1.31
Benicia	38° 02.6'	122° 07.8'	-0 24	-0 33	*1.09	*1.18
Martinez - Amoroco Pier	38° 02.0'	122° 07.5'	-0 26	-0 30	*1.09	*1.18
SUISUN BAY						
Suisun Slough entrance	38° 07.3'	122° 04.4'	+0 13	+0 26	*0.97	*0.93
Pierce Harbor, Goodyear Slough	38° 07.6'	122° 06.0'	+0 27	+0 41	*1.00	*0.96
Joice Island, Suisun Slough	38° 10.8'	122° 02.7'	+0 21	+0 41	*1.07	*1.00
Suisun City, Suisun Slough	38° 14.2'	122° 01.8'	+0 36	+1 01	*1.11	*1.00
Port Chicago, Suisun Bay	38° 03.4'	122° 02.3'	daily predictions			
Montezuma Slough Bridge	38° 11.2'	121° 58.8'	+0 37	+0 46	*1.01	*0.95
Bradmoor Island, Nurse Slough	38° 11.0'	121° 55.4'	+0 59	+1 06	*1.07	*0.99
Meins Landing, Montezuma Slough	38° 08.2'	121° 54.4'	+0 57	+1 11	*1.01	*0.93
Montezuma Slough	38° 04.6'	121° 53.1'	+1 16	+1 27	*0.84	*0.82
Point Buckler	38° 06.0'	122° 01.0'	+0 13	+0 22	*1.12	*1.08
Mallard Island Ferry Wharf	38° 02.6'	121° 55.1'	+0 54	+0 57	*0.83	*0.81
Pittsburg, New York Slough	38° 02.1'	121° 52.8'	+0 59	+1 05	*0.83	*0.84
SAN JOAQUIN RIVER						
Antioch	38° 01.2'	121° 48.9'	+1 12	+1 26	*0.77	*0.78
Threemile Slough entrance	38° 05.0'	121° 41.0'	+2 27	+2 52	*0.71	*0.68
Prisoners Point	38° 03.7'	121° 33.3'	+3 25	+3 29	*0.73	*0.69
Wards Island, Little Connection Slough	38° 03.0'	121° 29.8'	+3 45	+3 51	*0.68	*0.61
Blackslough Landing	37° 59.7'	121° 25.3'	+4 00	+4 15	*0.75	*0.62
Stockton	37° 57.5'	121° 17.4'	+4 06	+4 33	*0.81	*0.66
Mokelumne River						
Georgiana Slough entrance	38° 07.6'	121° 34.7'	+3 29	+3 41	*0.67	*0.59
Terminous, South Fork	38° 06.6'	121° 29.9'	+3 53	+4 11	*0.70	*0.59
New Hope Bridge ³	38° 14.0'	121° 29.0'	+4 22	+4 56	*0.73	*0.68
Bishop Cut, Disappointment Slough	38° 02.6'	121° 25.1'	+4 12	+4 12	*0.79	*0.66
False River	38° 03.3'	121° 39.3'	+2 45	+2 45	*0.66	*0.64
Dutch Slough	38° 00.7'	121° 38.3'	+2 33	+2 46	*0.68	*0.72
Irish Landing, Sand Mound Slough	38° 02.0'	121° 35.0'	+3 29	+3 34	*0.73	*0.68
Orwood, Old River	37° 56.0'	121° 34.0'	+4 32	+4 33	*0.76	*0.68
Holt, Whiskey Slough	37° 56.0'	121° 26.0'	+4 18	+4 39	*0.80	*0.68
Borden Highway Bridge, Old River	37° 53.4'	121° 34.2'	+4 40	+4 35	*0.64	*0.61
Borden Highway Bridge, Middle River	37° 53.5'	121° 39.3'	+4 50	+4 54	*0.67	*0.62
Borden Highway Bridge, San Joaquin River	37° 56.2'	121° 20.0'	+4 28	+4 48	*0.78	*0.64
Grant Line Canal (drawbridge)	37° 49.0'	121° 27.0'	+6 14	+6 20	*0.76	*0.68

Tide Corrections

Times with a minus sign occur *before* predictions; those with a plus sign occur *after*.

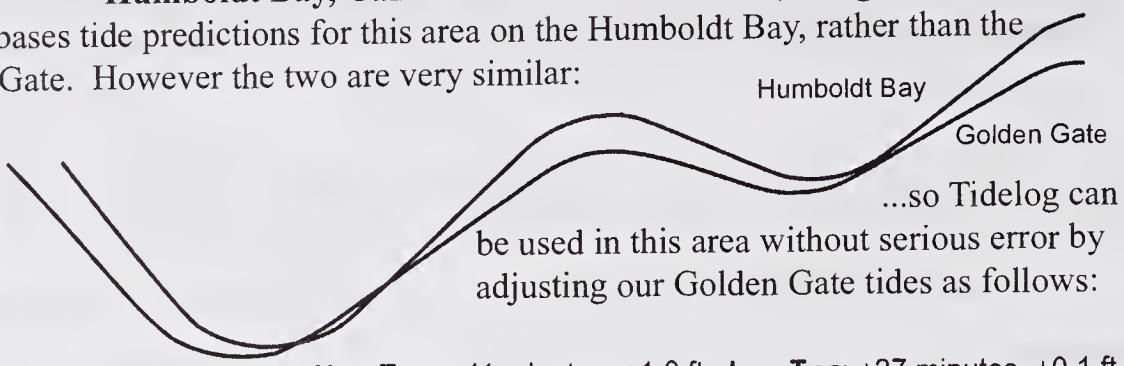
*Heights preceded by an asterisk are ratios; multiply by predicted tidal height.

	POSITION		DIFFERENCES			
	Latitude	Longitude	Time	Height	High Water	Low Water
	North	West	h m	h m	ft	ft
SACRAMENTO RIVER	(corrections apply to Port Chicago tides)					
Collinsville	38° 04.4'	121° 50.9'	+1 11	+1 20	*0.80	*0.80
Threemile Slough	38° 06.4'	121° 42.0'	+1 49	+1 58	*0.82	*0.78
Rio Vista	38° 08.8'	121° 41.4'	+1 51	+2 02	*0.88	*0.78
Steamboat Slough, Snug Harbor Marina	38° 12.0'	121° 36.7'	+2 24	+2 48	*0.80	*0.65
Snodgrass Slough	38° 16.5'	121° 29.2'	+5 00	+5 36	*0.49	*0.39
Clarksburg ³	38° 25.0'	121° 31.0'	+3 58	+5 02	*0.60	*0.41
Sacramento ³	38° 35.0'	121° 30.0'	+5 07	+6 32	*0.60	*0.41
OUTER COAST	(corrections apply to San Francisco tides)					
Bolinas Lagoon	37° 54.4'	122° 40.7'	+0 01	+0 34	*0.74	*0.71
Point Reyes	37° 59.8'	122° 58.5'	-0 51	-0 31	*0.98	*1.04
<i>Tomales Bay</i>						
Tomales Bay entrance	38° 14'	122° 59'	-0 12	+0 20	*0.87	*0.91
Sand Point, Tomales Bay	38° 13.9'	122° 58.0'	-0 04	+0 17	*0.85	*0.86
Blakes Landing, Tomales Bay	38° 11.4'	122° 55.0'	+0 32	+1 15	*0.86	*0.79
Marshall, Tomales Bay	38° 10'	122° 54'	+0 38	+1 16	-0.6	-0.1
Reynolds, Tomales Bay	38° 08.8'	122° 53.0'	+0 26	+1 59	*0.89	*0.83
Inverness, Tomales Bay	38° 06.8'	122° 52.1'	+0 29	+1 08	*0.94	*0.91
Bodega Harbor entrance	38° 18'	123° 03'	-0 38	-0 16	-0.2	+0.1
Fort Ross	38° 31'	123° 15'	-0 51	-0 30	*0.96	*0.96
	(corrections apply to Arena Cove tides)					
Green Cove	38° 42.2'	123° 26.9'	+0 01	-0 01	*0.88	*0.81
Arena Cove	38° 54.8'	123° 42.5'			daily predictions	
Point Arena	38° 57'	123° 44'	+0 03	+0 01	*0.98	*0.95
Mendocino, Mendocino Bay	39° 18'	123° 48'	+0 07	+0 01	*0.98	*0.95
Noyo River	39° 25.5'	123° 48'.3	+0 03	+0 03	*1.04	*1.04
Westport	39° 38'	123° 47'	+0 14	+0 00	*0.98	*0.95
Shelter Cove	40° 02'	124° 04'	+0 06	+0 05	*1.04	*1.03

Historic Tide Corrections

Humboldt Bay, California to Nehalem River, Oregon

NOAA bases tide predictions for this area on the Humboldt Bay, rather than the Golden Gate. However the two are very similar:



HIGH TIDE: +11 minutes, +1.0 ft. LOW TIDE: +27 minutes, +0.1 ft.

The result approximates NOAA's Humboldt Bay tide predictions within 15 minutes and several inches. Appropriate corrections from the table below may then be applied

	DIFFERENCES			
	Time		Height	
	High Water	Low Water	High Water	Low Water
NORTHERN CALIFORNIA				
Eel River Entrance	-0 31	-0.6	-0 16	0.0
Humboldt Bay:				
entrance	-0 09	-0.7	+0 07	0.9
North Spit	----	----	----	----
Fields Landing	-0 01	*0.99	+0 04	*0.99
Hookton Slough	+0 15	-0.2	+0 25	0.0
Elk River railroad bridge	+0 19	*0.71	+1 32	*0.31
Bucksport	+0 14	*1.01	+0 08	*1.03
Eureka	+0 26	*1.06	+0 13	*1.03
Eureka Slough bridge	+0 32	*1.09	+0 12	*1.02
Samoa	+0 19	+0.4	+0 07	0.0
Arcata Wharf	+0 48	+0.1	+0 54	+0.1
Trinidad Harbor	-0 25	-0.2	-0 13	0.0
Crescent City	-0 26	+0.1	-0 14	0.0
OREGON				
Brookings, Chetco Cove	-0 25	+0.1	-0 10	0.0
Wedderburn, Rogue River	-0 17	-0.2	+0 02	-0.1
Port Orford	-0 19	+0.4	-0 05	+0.1
Bandon, Coquille River	-0 03	+0.1	+0 14	-0.1
Coos Bay:				
Charleston	+0 04	+0.7	+0 16	0.0
Empire	+0 46	-0.2	+1 06	-0.1
Coos Bay	+1 35	+0.5	+1 44	-0.1
Umpqua River:				
entrance	+0 14	+0.1	+0 19	0.0
Gardiner	+1 05	-0.1	+1 25	-0.2
Reedsport	+1 20	-0.1	+1 40	-0.2
Siuslaw River:				
entrance	+0 03	+0.5	+0 19	0.0
Florence	+0 53	-0.2	+1 14	-0.2
Walport, Alsea Bay	+0 30	+0.8	+0 47	0.0
Yaquina Bay and River:				
Bar at entrance	+0 08	+1.0	+0 25	+0.1
Newport	+0 18	+1.1	+0 28	+0.1
Southbeach	+0 07	+1.4	+0 17	+0.1
Yaquina	+0 29	+1.3	+0 41	+0.1
Winant	+0 37	+1.3	+1 02	0.0
Toledo	+1 03	+1.2	+1 25	-0.1
Taft, Siletz Bay	+0 22	-0.3	+0 59	-0.3
Kernville Bay entrance	+0 58	-0.8	+1 39	-0.4
Nestucca Bay entrance	+0 29	+0.7	+0 58	-0.1
Tillamook Bay:				
Barview	+0 16	+0.6	+0 42	-0.1
Garibaldi	+0 48	+0.9	+1 02	0.0
Miami Cove	+0 49	+0.5	+1 12	-0.1
Bay City	+1 07	+0.2	+1 46	-0.2
Tillamook, Hoquarten Slough	+1 26	-0.3	+3 01	-0.5
Nehalem River:				
Brighton	+0 25	+0.9	+0 40	0.0
Nehalem	+0 51	+0.3	+1 42	-0.3

Current Corrections

Times with a minus sign occur *before* predictions; those with a plus sign occur *after*.
 Maximum current speed = predicted current multiplied by speed ratio.

	POSITION		FLOOD			EBB					
	Latitude North	Longitude West	Slack before h. m.	Max flood h. m.	Speed ratio	Slack before h. m.	Max ebb h. m.	Speed ratio			
CALIFORNIA COAST	(corrections apply to San Francisco Bay Entrance currents)										
San Pedro Channel ⁴	33° 36'	118° 16'	---	---	---	---	---	---			
Los Angeles and Long Beach Harbors ⁵	---	---	---	---	---	---	---	---			
El Segundo, Santa Monica Bay ⁶	33° 54'	118° 26'	---	---	---	---	---	---			
MONTEREY BAY											
Point Pinos	36° 38'	121° 57'				current weak and variable					
Point Santa Cruz, 2 miles S of	36° 55'	122° 01'				current weak and variable					
Ano Nuevo Island, 2 miles SW of	37° 05'	122° 22'				current weak and variable					
Point Montara, 2 miles W of	37° 32'	122° 34'				current weak and variable					
GOLDEN GATE and APPROACHES⁷											
San Fran. southern traffic lane, N end	37° 38.67'	122° 41.72'	-0 34	-0 32	0.1	-0 37	-0 40	0.1			
San Fran. main traffic lane, E end	37° 41.29'	122° 47.99'				current weak and variable					
San Fran. traffic separation zone buoy	37° 45.03'	122° 41.98'	-2 14	-0 32	0.3	+0 02	-0 34	0.1			
San Fran. northern traffic lane, SE end	37° 48.26'	122° 48.31'				current weak and variable					
Point Bonita Lt., 5.27 nm WSW of	37° 48.27'	122° 38.33'	-1 54	-1 35	0.2	-0 51	-1 01	0.2			
San Francisco Bar, N of ship channel	37° 47.12'	122° 36.84'	-0 11	-0 08	0.4	+0 07	+0 03	0.4			
Point Lobos, 3.73 nm W of	37° 47.25'	122° 35.32'	-2 16	-1 03	0.3	-0 20	-0 31	0.2			
Point Lobos, 2.5 miles W of ⁸	37° 46.37'	122° 34.90'	---	+0 32	0.4	---	-1 08	0.6			
Point Lobos, 1.3 nm SW of	37° 46.30'	122° 32.13'	-1 26	-0 51	0.5	+0 27	-0 06	0.4			
South Channel	37° 45'	122° 32'	-1 31	-1 21	0.5	-0 14	-0 52	0.5			
Point Lobos, 5.47 nm SW of	37° 43.23'	122° 35.87'	-2 01	-2 02	0.3	-0 51	-1 10	0.3			
Bonita Channel approach ⁸	37° 50'	122° 37'	---	-0 10	0.2	---	-0 56	0.2			
Bonita Channel, off Tennessee Cove ⁸	37° 50.05'	122° 33.78'	---	-0 34	0.5	---	-0 56	0.3			
Bonita Channel, off Point Bonita	37° 48.95'	122° 32.13'	---	-0 22	0.6	---	-1 56	0.1			
Point Bonita, 0.8 nm NE of	37° 49.25'	122° 30.97'	-4 51	-3 38	0.4	-4 21	-4 01	0.3			
Point Bonita Lt. 0.4 nm SSE of	37° 48.72'	122° 31.27'	-1 08	-1 04	0.3	-1 28	-1 25	0.5			
Point Bonita, 0.95 nm SSE of	37° 48.07'	122° 31.10'	-0 26	-0 08	1.0	+0 13	-0 18	0.8			
Mile Rock Lt., 0.2 nm NW of	37° 47.72'	122° 30.68'	-0 35	-0 25	1.1	+0 18	-0 33	0.9			
Point Diablo, 0.2 mile SE of	37° 49.07'	122° 29.80'	-0 09	-0 53	0.8	-0 47	+0 08	1.0			
Baker Beach (South Bay), 0.3 nm NW of	37° 47.87'	122° 29.31'	-5 06	-4 15	0.6	-1 59	-2 52	0.3			
Fort Point, 0.3 nm W of	37° 48.55'	122° 28.97'	-2 10	-0 41	0.6	+1 02	+0 20	0.2			
San Francisco Bay Entrance (Outside)	37° 48.64'	122° 30.12'				daily predictions					
	(corrections apply to Golden Gate Bridge currents)										
Golden Gate Bridge, 0.88 nm NE of	37° 49.75'	122° 27.72'				daily predictions					
Golden Gate Bridge, 0.46 nm E of	37° 49.20'	122° 28.38'	-0 02	-0 06	0.9	-0 06	-0 08	1.1			
Golden Gate Bridge, 0.8 mile E of	37° 49.30'	122° 27.72'	+0 42	+0 15	0.9	+0 27	+0 43	1.4			
Fort Point, 0.5 nm E of	37° 48.70'	122° 27.96'	-0 43	-2 47	0.2	-0 30	-1 12	0.8			
SAN FRANCISCO BAY, South⁹											
Alcatraz Island, 0.2 mile W of	37° 49.67'	122° 25.82'	+0 15	+0 00	0.8	+0 24	+0 20	1.1			
Alcatraz Island, SW of	37° 48.86'	122° 25.92'	-0 18	-0 44	0.5	-0 55	-0 43	1.0			
Alcatraz Island, S of	37° 49.00'	122° 25.02'	+0 15	-0 03	0.5	+0 07	+0 02	1.2			
Alcatraz Island, 0.5 mile N of	37° 50.11'	122° 25.21'	+0 24	+0 18	0.6	-0 04	-0 05	1.0			

Current Corrections

Times with a minus sign occur *before* predictions; those with a plus sign occur *after*.
 Maximum current speed = predicted current multiplied by speed ratio.

	POSITION		FLOOD			EBB				
	Latitude	Longitude	Slack before h. m.	Max flood h. m.	Speed ratio	Slack before h. m.	Max ebb h. m.	Speed ratio		
North		West								
SAN FRANCISCO BAY, South, cont.⁹										
(corrections apply to Golden Gate Bridge currents)										
North Point, Pier 35, N of	37° 48.85'	122° 24.42'	-0 24	-0 51	0.8	-0 57	-0 45	1.4		
Emmeryville Marina	37° 50.60'	122° 19.52'	---	-1 02	0.1	---	---	--		
Treasure Island, 0.78 nm NW of	37° 50.24'	122° 23.23'	-0 58	-1 00	0.5	-0 38	-0 40	0.6		
Treasure Island, 0.8 mile W of	37° 49.3'	122° 23.5'	-0 01	-0 37	0.4	-0 39	-0 01	1.5		
Treasure Island, 0.2 mile W of	37° 49.3'	122° 22.7'	-0 54	-0 50	0.5	-0 32	-0 30	1.2		
(corrections apply to Oakland currents)										
Pier 23	37° 48.32'	122° 23.84'	+0 34	-1 00	0.9	-1 19	+0 06	1.5		
Yerba Buena Island, W of (midchannel)	37° 48.60'	122° 22.98'	+0 49	-0 13	1.2	-0 16	+0 20	1.6		
Oakland, Yerba Buena Island	37° 48.59'	122° 21.04'				daily predictions				
San Francisco-Oakland Bay Bridge ⁷	---	---	---	---	--	---	---	--		
Bay Bridge, Span B-C	37° 47.85'	122° 22.43'	+0 47	+0 05	1.4	+0 01	+0 33	1.6		
Bay Bridge, Pier D	37° 48.06'	122° 22.43'	+0 56	+0 04	1.3	-0 01	+0 35	1.6		
Treasure Island, 0.5 mile N of	37° 50.43'	122° 22.10'	+0 31	+0 02	0.8	+0 22	+0 42	0.9		
Treasure Island, 0.85 nm E of	37° 49.50'	122° 20.78'	-0 13	+0 16	0.6	+0 24	-0 26	0.5		
Treasure Island, 0.3 mile E of	37° 49.6'	122° 21.3'	+1 12	+0 13	1.0	+0 00	+1 02	1.2		
Yerba Buena Island, 0.3 nm SE of	37° 48.25'	122° 21.43'	+0 31	+0 05	0.5	+0 07	+0 21	0.8		
Oakland Outer Harbor entrance	37° 48.4'	122° 20.7'	-0 04	-0 07	1.1	+0 22	+0 09	1.3		
Oakland Inner Harbor entrance	37° 48.1'	122° 20.4'	-0 11	-0 12	0.7	-0 01	-0 09	1.2		
Oakland Inner Harbor channel	37° 47.70'	122° 19.10'	+1 20	+0 15	0.3	-0 10	+0 36	0.5		
Oakland Inner Harbor Reach	37° 47.57'	122° 17.13'	+0 38	-0 03	0.2	-0 28	+0 13	0.4		
Oakland Harbor, Webster Street	37° 47.50'	122° 16.47'	+0 08	-0 32	0.6	-0 18	-0 03	0.8		
Alameda Estuary, SE end	37° 45.69'	122° 13.42'	+0 01	-0 17	0.8	-0 33	-0 15	0.8		
Oakland 7 th St. Marine, 0.6 nm SSW of	37° 47.67'	122° 20.65'	-0 01	+0 27	0.8	-0 02	+0 03	0.6		
Brooklyn Basin	37° 47.11'	122° 15.63'	+0 24	-0 26	0.1	-0 37	+0 34	0.3		
(corrections apply to Golden Gate Bridge currents)										
Rincon Point	37° 47.42'	122° 22.40'	-0 09	-0 32	0.7	-0 27	-0 20	1.3		
Rincon Point, midbay	37° 47.00'	122° 21.23'	-0 22	-0 33	0.8	-0 38	-0 24	1.3		
Mission Rock, 0.6 mile E of	37° 46.4'	122° 22.1'	-0 09	-0 21	0.9	-0 08	+0 06	1.4		
Mission Rock, 1.3 mile E of	37° 46.5'	122° 21.2'	+0 01	-0 31	0.8	-0 02	+0 14	1.2		
Mission Rock, 2.0 miles E of	37° 46.6'	122° 20.3'	-0 49	-0 51	0.6	-0 18	-0 20	1.4		
Potrero Point, 1.08 nm E of	37° 45.45'	122° 21.47'	-0 08	-0 25	0.6	-0 06	-0 04	1.1		
Potereo Point, 2 miles E of	37° 45'	122° 20'	-0 08	-0 44	0.6	+0 03	-0 02	1.0		
Alameda Radar Tower, 0.9 nm SSW of	37° 44.73'	122° 16.98'	-0 55	-1 14	0.2	-1 18	-1 12	0.4		
(corrections apply to San Mateo Bridge currents)										
Point Avisadero, 0.3 mile E of	37° 43.8'	122° 20.9'	-0 30	-0 21	1.2	-0 13	-0 20	1.3		
Point Avisadero, 1 mile E of	37° 43.8'	122° 20.2'	-0 32	+0 02	1.2	+0 25	-0 07	1.0		
Point Avisadero, 2 miles E of	37° 43.9'	122° 18.8'	-0 32	-0 06	1.1	-0 10	-0 24	1.1		
Point Avisadero, 0.6 nm ESE of	37° 43.38'	122° 19.43'	-0 30	-0 25	1.0	-0 14	-0 39	1.0		
Point Avisadero, 1.25 nm SSE of	37° 42.47'	122° 20.97'	-0 45	-0 15	0.9	-0 29	-0 52	0.8		
Hunters Point, 1.6 nm SE of	37° 41.76'	122° 20.29'	-0 39	-0 37	0.9	-0 36	-0 40	0.9		
Oakland Airport, SW of	37° 40.93'	122° 13.85'	-1 05	-0 46	0.5	-0 39	-1 18	0.5		
Sierra Point, 1.3 miles ENE of	37° 41.08'	122° 21.40'	-0 47	-0 34	0.8	-0 25	-0 40	0.7		

Current Corrections

Times with a minus sign occur *before* predictions; those with a plus sign occur *after*.
 Maximum current speed = predicted current multiplied by speed ratio.

	POSITION		FLOOD			EBB		
	Latitude North	Longitude West	Slack before h. m.	Max flood h. m.	Speed ratio	Slack before h. m.	Max ebb h. m.	Speed ratio
SAN FRANCISCO BAY, South, cont.⁹	<i>(corrections apply to San Mateo Bridge currents)</i>							
Sierra Point, 1.2 nm E of	37° 40.68'	122° 19.05'	-0 42	-0 30	0.6	-0 26	-0 22	0.5
Oyster Point, 2.8 miles E of	37° 39.9'	122° 19.4'	-0 29	-0 20	0.7	-0 13	-0 16	0.8
Sierra Point, 4.4 miles E of	37° 40.4'	122° 17.7'	-0 48	-0 34	0.7	-0 09	-0 33	0.6
Point San Bruno, 0.51 nm E of	37° 39.25'	122° 21.83'	-1 16	-0 27	0.5	-0 21	-1 07	0.3
Mulford Gardens Chan. "Buoy 2" SSW of	37° 39.03'	122° 13.63'	-1 12	-0 58	0.7	-0 43	-1 07	0.6
Coyote Point, 2.3 nm NNE of	37° 37.53'	122° 17.76'	+0 07	-0 15	0.8	-0 17	+0 07	1.0
Little Coyote Pt., 3.4 nm NNE of	37° 37.43'	122° 13.88'	-1 06	-0 54	0.4	-0 50	-1 01	0.4
Little Coyote Pt., 3.1 nm ENE of	37° 35.88'	122° 12.33'	-1 52	-1 34	0.4	-0 58	-1 49	0.4
Little Coyote Pt., 1.2 nm NE of	37° 35.42'	122° 14.92'	-0 09	-0 26	1.1	-0 11	-0 11	1.1
San Mateo Bridge	37° 35.27'	122° 15.01'				<i>daily predictions</i>		
Redwood Pt., Blair I., 1.15 nm NNE of	37° 33.48'	122° 11.93'	-0 02	-0 21	1.0	-0 02	-0 06	1.1
Redwood Point, 1.7 nm E of	37° 31.84'	122° 09.61'	-0 04	-0 01	1.1	+0 00	+0 01	1.2
Redwood Creek	37° 31.55'	122° 11.95'	-0 36	+0 02	0.6	-0 22	-0 56	0.6
Dumbarton Highway Bridge	37° 30.6'	122° 07.2'	-0 01	+0 26	1.1	-0 07	-0 47	0.9
Dumbarton Hwy. Bridge, 0.28 nm SE of	37° 30.08'	122° 06.93'	-0 21	+0 06	1.0	+0 02	-0 37	1.2
Dumbarton Point, 1.15 nm SE of	37° 29.25'	122° 04.88'	-0 12	-0 20	0.8	+0 12	+0 54	0.6
Dumbarton Point, 2.25 miles SE of	37° 28.5'	122° 04.2'	+0 08	-0 06	0.9	+0 00	+0 56	0.8
Yellow Bluff, 0.81 nm NE of	37° 50.73'	122° 27.43'	-0 27	-0 28	1.2	-0 37	-0 59	1.1
SAN FRANCISCO BAY, North	<i>(corrections apply to Golden Gate Bridge currents)</i>							
Yellow Bluff, 0.8 mile E of	37° 50.1'	122° 27.3'	+0 24	+0 16	1.0	+0 22	+0 44	1.4
Point Cavallo, 1.3 miles E of	37° 49.9'	122° 26.6'	+0 31	+0 26	0.9	+0 42	+0 44	1.6
Point Blunt, Angel I., 0.5 nm SW of	37° 50.73'	122° 25.38'	+0 56	+0 09	0.4	+0 03	+0 33	1.0
Point Blunt, Angel I., 0.25 mile S of	37° 50.8'	122° 25.0'	+0 12	+0 11	0.6	+0 24	+1 08	1.3
Point Blunt, Angel I., 0.8 mile SE of ¹⁰	37° 50.7'	122° 24.3'	-1 06	+0 02	0.4	+0 21	-0 12	0.8
Point Blunt, Angel I., 0.25 nm E of	37° 51.17'	122° 24.73'	+1 45	-0 06	0.4	+0 17	+2 23	1.0
Angel Island, off Quarry Point	37° 51.8'	122° 24.8'	+2 11	+0 22	0.2	+1 10	+1 47	1.2
Angel Island, 0.75 mile E of	37° 51.8'	122° 24.1'	+1 30	+1 10	0.4	+1 35	+1 59	0.6
Point Simpson, Angel I., 1.05 nm E of	37° 52.43'	122° 24.17'	+0 53	+1 08	0.5	+1 03	+0 33	0.5
Fleming Point, 1.72 nm SW of	37° 52.62'	122° 21.53	-1 04	-1 02	0.2	-0 24	-0 47	0.3
Richardson Bay Entrance	37° 51.40'	122° 28.19'	<i>see Rotary Tidal Currents Table on the following pages</i>					
Raccoon Strait, off Point Stuart	37° 51.67'	122° 27.12'	+0 11	+0 08	0.5	-0 02	+0 04	1.2
Raccoon Strait	37° 52.32'	122° 26.52'	+0 20	-0 22	0.5	-0 20	-0 10	0.9
Raccoon Strait, off Ayala Cove	37° 52.3'	122° 26.3'	---	-0 38	0.5	-0 06	+0 02	1.0
Bluff Point, 0.1 mile E of	37° 53.0'	122° 26.1'	+1 04	-0 26	0.6	+0 18	+0 50	1.2
Bluff Point, 1.15 nm E of	37° 53.23'	122° 24.78'	+0 55	+0 46	0.4	+0 58	+0 33	0.6
Southampton Shoal Light, 0.2 mile E of	37° 52.95'	122° 23.75'	+1 04	+0 55	0.3	+0 53	+0 25	0.7
	<i>(corrections apply to Richmond currents)</i>							
Point Chauncey, 1.3 miles E of	37° 53.45'	122° 25.13'	+0 08	+0 29	0.9	+0 13	+0 09	0.9
Point Chauncey, 0.75 nm NW of	37° 54.18'	122° 27.53'	+0 08	-0 46	0.7	+0 10	-0 09	0.6
Point Chauncey, 1.25 nm N of	37° 54.92'	122° 26.76'	+0 59	+0 36	0.8	+0 09	+0 33	1.1
Point Potrero Reach (Buoy "10")	37° 54.18'	122° 22.35'				<i>current weak and variable</i>		
Point Richmond, 0.5 mile W of	37° 54.3'	122° 24.0'	-0 16	+0 01	0.5	+0 10	-0 12	0.5
Point Richmond, 0.8 nm NNW of	37° 55.25'	122° 23.80'	-0 48	-1 55	0.2	-1 14	-2 02	0.2

Current Corrections

Times with a minus sign occur *before* predictions; those with a plus sign occur *after*.
 Maximum current speed = predicted current multiplied by speed ratio.

POSITION		FLOOD			EBB		
Latitude	Longitude	Slack before h. m.	Max flood h. m.	Speed ratio	Slack before h. m.	Max ebb h. m.	Speed ratio
North	West						

SAN FRANCISCO BAY, North, cont.

(corrections apply to Richmond currents)

Richmond	37° 55.76'	122° 25.50'	daily predictions					
Red Rock, E of	37° 55.77'	122° 25.70'	+0 06	+0 03	0.8	+0 28	+0 07	0.8
Red Rock, 0.60 nm NNE of	37° 56.40'	122° 25.60'	-0 18	-0 37	1.1	+0 10	-0 33	0.9
Point San Quentin, 0.82 nm E of	37° 56.47'	122° 27.70'	-0 09	+0 02	0.4	+0 02	-0 46	0.5
Point San Quentin, 1.3 nm E of	37° 56.53'	122° 27.16'	+0 20	+0 19	0.8	+0 35	+0 23	0.9
Point San Quentin, 1.9 miles E of	37° 57.0'	122° 26.4'	+0 52	+0 26	0.9	+0 28	+0 37	1.3

SAN PABLO BAY

Point San Pablo, midchannel	37° 58.13'	122° 26.35'	+0 43	+0 35	1.3	+0 16	+0 28	1.3
Point San Pedro, 0.55 nm SE of	37° 58.78'	122° 26.20'	+0 28	+0 23	1.3	+0 39	+0 30	1.5
Pinole Point, 1.18 nm W of	38° 00.48'	122° 23.38'	+0 07	-0 25	0.5	+0 07	+0 06	0.6
Pinole Point, 3.0 nm WNW of	38° 01.60'	122° 25.48'	+0 01	-0 19	0.5	+0 05	+0 03	0.5
Pinole Point, 1.27 nm NNW of	38° 01.85'	122° 22.63'	+1 21	+1 07	0.9	+1 00	+1 19	1.1
Pinole Point, 1.42 nm NNW of	38° 02.03'	122° 22.75'	+1 09	+0 51	0.7	+0 52	+1 11	0.8
Pinole Shoal	38° 02.85'	122° 20.05'	+1 59	+1 46	0.08	+1 26	+1 49	1.0
Petaluma River approach (Buoys 3 & 4)	38° 02.61'	122° 25.58'	-0 10	-0 11	0.6	+0 03	+0 12	0.6
Petaluma River approach	38° 04.2'	122° 25.2'	-0 01	-0 24	0.4	-0 15	-0 06	0.4
Petaluma River entrance	38° 06.63'	122° 29.58'	+0 10	+0 05	0.5	-0 19	-1 00	0.6
Wilson Point, 1.55 nm N of	38° 02.25'	122° 09.03'	+0 54	+0 57	0.5	+1 10	+1 08	0.5
Wilson Point 3.90 nm NNW of	38° 04.47'	122° 20.55'	-0 08	-0 44	0.3	+0 08	+0 22	0.3

(corrections apply to Carquinez Strait currents)

Davis Point, 1.0 nm NW of	38° 03.71'	122° 16.60'	-0 09	-0 16	0.6	-0 35	-0 21	0.8
Davis Point, (midchannel)	38° 03.80'	122° 15.5'	-0 13	-0 28	0.7	-0 17	-0 38	0.9

CARQUINEZ STRAIT

Mare Island Strait NE of Pier 34	38° 04.63'	122° 14.74'	-1 46	-1 16	0.7	-1 14	-1 45	1.0
Mare Island Strait (Buoy "4")	38° 04.45'	122° 14.57'	-2 25	-1 05	0.3	-1 23	-3 07	0.2
Carquinez Bridge, I-80	38° 03.74'	122° 13.65'	+0 01	+0 04	0.7	-0 10	+0 05	0.9
Carquinez Strait (west end, bridge)	38° 03.68'	122° 13.10'	daily predictions					
Dillon Point	38° 03.53'	122° 11.58'	-0 14	-0 55	0.4	-0 50	+0 13	0.6
Martinez Marina, 0.65 nm NW of	38° 01.98'	122° 08.98'	-0 12	-0 03	0.7	+0 10	-0 02	0.6
Martinez Marina, 0.50 nm W of	38° 01.72'	122° 08.92'	-0 37	-0 43	0.7	+0 27	+0 11	0.7
Martinez Marina, 0.61 nm NNW of	38° 02.18'	122° 08.68'	-0 56	-0 35	0.5	-0 13	-1 00	0.6
Army Pt. Pier Lt. 0.2 nm SE of	38° 02.33'	122° 08.02'	-0 07	-0 13	0.7	-0 16	+0 08	1.0

SUISUN BAY

(corrections apply to Benicia Bridge currents)

Grizzly Bay entrance	38° 06.19'	122° 03.15'	+0 00	+0 37	0.7	+0 20	-0 24	0.5
Montezuma Slough								
1 mile inside west entrance	38° 08.83'	122° 03.38'	-0 24	-0 39	0.5	-0 17	-1 42	0.5
West entrance	38° 07.92'	122° 03.48'	-0 10	-0 55	0.9	+0 06	-1 02	0.9
Suisun Slough								
1 mile inside entrance	38° 08.27'	122° 04.88'	-0 54	-0 52	0.3	-0 31	-1 42	0.4
Entrance	38° 07.27'	122° 04.05'	-0 29	-0 59	0.8	-0 24	-0 58	0.9
0.5 nm E of entrance	38° 07.13'	122° 03.20'	-0 21	-1 07	0.5	-0 06	+0 07	0.3
Benicia Bridge	38° 02.49'	122° 07.53'				daily predictions		

Current Corrections

Times with a minus sign occur *before* predictions; those with a plus sign occur *after*.
 Maximum current speed = predicted current multiplied by speed ratio.

POSITION		FLOOD			EBB		
Latitude	Longitude	Slack before h. m.	Max flood h. m.	Speed ratio	Slack before h. m.	Max ebb h. m.	Speed ratio
North	West						

SUISUN BAY, cont.

(corrections apply to Benicia Bridge currents)

Avon Pier, 0.15 nm N of	38° 03.10'	122° 05.42'	+0 06	+0 32	0.9	+0 37	+0 10	0.7
Pt. Edith, 1.7 nm NNW of	38° 04.72'	122° 05.03'	+0 05	+0 14	0.8	+0 38	+0 06	0.5
Seal Island, S of	38° 03.20'	122° 02.97'	+0 15	+0 08	0.6	+1 09	+0 37	0.6
Roe Island Channel	38° 03.95'	122° 02.07'	+1 03	+0 51	0.9	+0 38	+0 52	1.1
Roe Island, Gilbert Pt., 0.15 nm NW of	38° 04.42'	122° 01.30'	+1 08	+0 54	0.6	+1 05	+1 01	0.8
Suisun Cutoff	38° 05.33'	122° 00.43'	+1 41	+1 53	0.7	+1 42	+1 04	0.4
Middle Point Lt., 0.18 nm NNW of	38° 03.45'	121° 59.58'	+1 06	+1 11	1.0	+1 11	+0 57	1.0
Stake Point, 0.9 nm NNW of	38° 03.88'	121° 57.33'	+0 14	+0 56	0.5	+0 48	+0 28	0.4
Simmons Point, 0.6 nm ESE of	38° 02.89'	121° 55.35'	+1 27	+1 32	1.2	+1 22	+1 12	1.3
Spoonbill Creek, near bridge	38° 03.53'	121° 54.28'	+0 12	+0 27	1.0	+1 17	+0 36	0.9
Montezuma Slough, east end, near bridge	38° 04.67'	121° 53.03'	+2 30	+2 25	0.7	+2 23	+2 22	0.8
New York Slough, 0.6 mile E of Pt. Emmet	38° 01.95'	121° 52.14'	+1 24	+1 24	0.9	+1 14	+1 22	1.0
New York Slough, Winter Island	38° 01.70'	121° 50.78'	+1 02	+0 45	0.8	+1 00	+1 10	0.8

SACRAMENTO RIVER¹¹

Entrance, 0.7 nm SW of Chain Island	38° 03.51'	121° 52.27'	+1 41	+1 31	0.9	+1 27	+1 37	1.1
Point Sacramento, 0.2 nm NE of	38° 03.86'	121° 50.02'	+1 36	+1 32	0.9	+1 31	+1 25	1.0
Sherman Island East, 0.2 mile N of	38° 03.52'	121° 48.25'	+1 22	+1 12	0.7	+1 23	+0 29	0.8
Sherman Island East, 0.2 mile N of	38° 04.63'	121° 45.84'	+1 44	+1 51	0.8	+1 44	+1 26	0.8

SAN JOAQUIN RIVER¹¹

Pt. San Joaquin, 0.45 nm ENE of	38° 03.70'	121° 51.00'	+1 24	+1 37	1.0	+1 44	+1 13	0.6
Point Beenar, 0.7 nm N of	38° 02.53'	121° 50.28'	+2 35	+2 09	0.4	+1 54	+1 21	0.4
Point Beenar, 100 yards, NE of	38° 01.95'	121° 50.13'	+2 35	+2 09	0.7	+2 42	+2 24	0.9
Antioch Point	38° 01.44'	121° 49.35'	+1 48	+1 53	1.0	+1 54	+1 49	1.1
West Island Light, N of	38° 01.49'	121° 47.40'	+2 08	+2 01	0.8	+1 48	+1 55	1.0
Antioch, Route 160 bridge	38° 01.62'	121° 45.18'	+1 56	+2 02	0.9	+1 58	+1 56	0.8
Vulcan Island, 0.5 mile E of	37° 59.12'	121° 23.45'	+3 38	+3 34	0.5	+3 39	+3 29	0.3
Brandt Bridge	37° 51.85'	121° 19.38'	+5 40	+5 28	0.5	+5 02	+5 20	0.7

END NOTES

1. The slough in this area goes dry at low water stages of the tide. The mean water high depth is about 5 feet.
2. Due to bottom configuration and depths at low water stages, a low water stand may occur at this station.
3. These data apply only during low river stages.
4. San Pedro Channel, 7 miles south of Los Angeles Harbor Breakwater. There are two periodic currents here both of which are rotary, turning clockwise, and rather weak. The tidal current has a speed at strength of about 0.2 knot. The other current, due apparently to daily land and sea breezes, has a period of 24 hours and an average speed of about 0.2 knot. The greatest speed during 5 months of observations was 1.5 knots. Currents greater than 1 knot occur infrequently.
5. In Los Angeles and Long Beach Harbors, the tidal current is weak. Currents can exceed 1 knot in the outer harbor at San Pedro, under strong wind conditions. Also it is reported that three minute surge waves are responsible for major ship movements and damage.
6. Observations indicate ebb is very weak.
7. Large current eddies which cause ships to steer off course are reported near the foundation piers of Golden Gate Bridge and San Francisco-Oakland Bay Bridge.
8. Current is somewhat rotary, turning clockwise.
9. See the Slack Water Time Differences Table on the following pages.
10. Current is somewhat rotary, turning counterclockwise. 4h 25m prior to computed maximum flood the current flows southward with a speed of 0.6 of the flood speed at the reference station.
11. Data do not apply during freshets.

ROTARY TIDAL CURRENTS EXPLANATION

Offshore and in some of the wider indentations of the coast, the tidal current is quite different from that found in the more protected bays and rivers. In these inside waters the tidal current is of the reversing type. The current sets in one direction for a period of 6 hours after which it ceases to flow momentarily and then sets in the opposite direction during the following 6 hours. The offshore tidal current, not being confined to a definite channel, changes its direction continually and never slows to a true slack water. Thus in a tidal cycle of 12 ½ hours it will have set in all directions of the compass. This type of current is referred to as a rotary current.

A characteristic feature of the rotary current is the absence of slack water. Although the current generally varies from hour to hour, this variation from greatest current to least current and back again to greatest does not give rise to a period of slack water. When the speed of the rotary tidal current is least, it is known as the minimum current, and when it is greatest it is known as the maximum current. The minimum and maximum speeds of the rotary current are related to each other in the same way as slack and strength of current. A minimum speed of the current follows a maximum speed by an interval of approximately 3 hours and followed in turn by another maximum after a further interval of 3 hours.

The following table provides the direction and speed of the rotary current for each hour at a number of offshore stations. The times and speeds are referred to predictions for a reference station in the daily graphics and corrections. All times are in local standard time for the secondary station.

The speeds given in the table are the average speeds for the station. The Moon when new, full, or at perigee tends to increase the speeds 15 to 20 percent above average. When perigee occurs at or near the time of new or full Moon, the current speeds will be 30 to 40 percent above average. The Moon when at first and third quarter or at apogee tends to decrease the current speeds below average by 15 to 20 percent. When apogee occurs at or near the first or third quarter Moon, the currents will be 30 to 40 percent below average. The speeds will be about average when apogee occurs at or near the time of the new or full Moon and also when perigee occurs at or near the first or third quarter Moon.

The direction of the current is given in degrees, true, reading clockwise from 0° at north, and is the direction toward which the water is flowing.

The speeds and directions are for tidal current only and do not include the effect of the wind. When a wind is blowing, a wind-driven current will be set up as is superimposed on the normal tidal current. The actual current encountered will thus be a combination of the wind-driven current and the tidal current.

As an example, in the following table the current at Richardson Bay Entrance is given for each hour after maximum flood at San Francisco Bay Entrance. Suppose it is desired to find the direction and speed of the current at Richardson Bay Entrance at 3:15 p.m. (15:15) on a day when the maximum flood at San Francisco Bay Entrance is predicted in the daily graphics to occur at 13:20. The desired time is therefore 2 hours after the maximum flood at San Francisco Bay Entrance. From the table the tidal current at Horse Head Island at 2 hours is setting 340° true with an average speed of 0.2 knots. If this day is near the time of new Moon and about half way between apogee and perigee, then the distance effect of the moon will be nil and the phase effect alone will increase the speed by about 15 percent.

ROTARY TIDAL CURRENTS TABLE

STATION NAME	DEPTH	HOURLY TIME INCREMENTS											
		0	1	2	3	4	5	6	7	8	9	10	11
After Maximum Flood at San Francisco Bay													
Column Point, W of Cross Sound	74.4	0.42 91	0.23 132	0.32 187	0.52 204	0.56 208	0.47 215	0.34 232	0.19 292	0.33 353	0.42 28	0.51 62	0.59 80
Richardson Bay Entrance	4	0.19 313	0.35 250	0.45 236	0.49 228	0.41 221	0.25 175	0.32 120	0.12 113	0.16 97	0.34 27	0.39 16	0.39 11

knots
degrees

SLACK WATER TIME DIFFERENCES FOR PLACES ALONG SAN FRANCISCO PIERS

Station or Locality	Beginning of			
	Latitude N	Longitude W	Flood h. m.	Ebb h. m.
<i>on San Francisco Bay Entrance</i>				
St. Francis Yacht Club breakwater	37° 48.5'	122° 26.5'	-0 10	-1 50
Aquatic Park, 0.2 mile W of	37° 48.6'	122° 24.7'	-0 35	-2 05
Pier 37	37° 48.6'	122° 24.5'	-1 35	-2 20
Pier 29	37° 48.4'	122° 24.0'	-1 10	-2 20
Pier 7	37° 48.0'	122° 23.6'	-0 55	-2 05
Pier 14	37° 47.7'	122° 23.3'	-0 55	-3 00
Pier 26	37° 47.4'	122° 23.0'	-1 40	-1 50
Pier 38	37° 47.0'	122° 23.0'	-0 25	-2 25
Pier 50	37° 46.4'	122° 22.8'	-1 40	-2 20
Bethlehem Pier No. 8	37° 45.6'	122° 22.7'	-1 20	-1 55
Pier 90, 0.5 mile SE of	37° 44.5'	122° 22.4'	-1 50	-2 05
Point Avisadero	37° 43.7'	122° 21.3'	-1 25	-0 40
Point Avisadero, 0.8 mile S of	37° 43.0'	122° 21.5'	-1 30	-3 25

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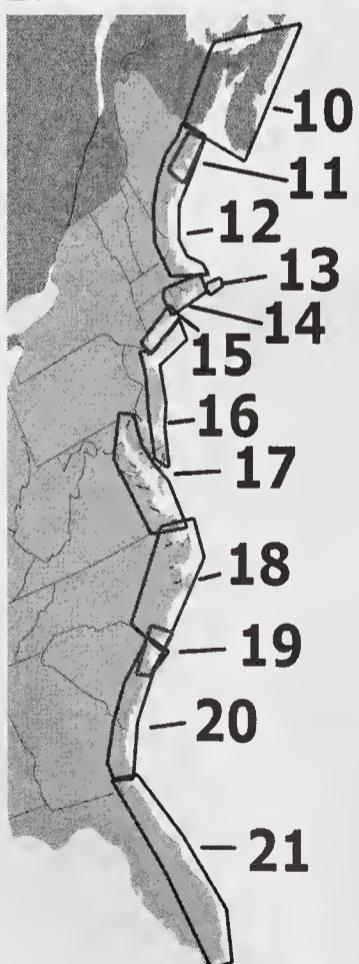
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<u>Order value</u>	<u>\$10 - \$25</u>	<u>\$26 - \$50</u>	<u>\$51 - \$90</u>	<u>\$91 - \$120</u>
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CANADIAN SHIPPING

Shipping to Canada gives us limited options and requires additional postage. The amounts below are valid for single editions only, please call for pricing when ordering multiple Tidelogs.

<u>First Class Mail</u>	<u>USPS Priority</u>	<u>USPS Express</u>
	(6 - 10 days) \$16.15	(3 - 5 days) \$19.95

PRIVACY POLICY

We consider your name, address, e-mail address and telephone number to be confidential. Your phone number is only used if there's a problem with your order. All that's mailed to your address is a reminder if we haven't received your renewal by a certain date. None of your information is ever shared with any third party.

We also safeguard your credit card information. Your card number is available only to our order personnel, whether by phone, mail, fax or left on our voicemail. After processing, the number is not retained in our computer database.

TIDAL FACTORS

Earth's tides are primarily produced by the gravitational forces of the moon and sun. Even though the moon is millions of times smaller than the sun, its proximity to the Earth gives it a tidal influence more than twice that of the sun's. Although the moon's gravitational pull is only one-ten millionth of the Earth's, when it is combined with the centrifugal force produced as the Earth spins on its axis, tractive force is created. Tractive force is responsible for creating a tidal bulge on the side of the Earth facing away from the moon twice a day, resulting in two high and low tides per day for most locations.

Twice a month, when the moon is full and when it is new, the moon, sun, and Earth are aligned. The resulting spring tides often have a greater range, with higher highs and lower lows than ordinarily. Conversely, when the moon is in quarter phase, the moon and sun's gravitational forces tend to counteract each other resulting neap tides, which are in turn much weaker.

Since the moon's orbit around the Earth is elliptical, its distance varies by about 11% during a month. At perigee, the moon is closest and its tidal influence is increased. The opposite is true at apogee, the farthest point of its monthly orbit. The sun's influence is increased in January when the Earth is at perihelion and decreased in July when the Earth is at aphelion. When a new or full moon coincides with perigee (augmented in winter by perihelion), the result is dramatically increased tidal ranges, called perigean spring tides.

The moon's declination also affects the tides. Since its orbit is inclined relative to the earth's equator, the moon appears to cross over the equator twice a month, reaching maximum North declination and maximum South declination about two weeks apart. Either point of maximum declination tends to encourage inequality between day's two high (or low) tides. Note the difference in Tidelog's tide curves when the moon is at maximum declination compared with those when the moon is over the equator. (This effect is more pronounced on the Pacific coast than on the Atlantic.)

Planetary tidal influence is mostly negligible. Since a planet's tidal attraction varies directly with mass and inversely with distance squared, the planet having the greatest influence on Earth's tides (Venus, the closest) exerts a force only a few thousandths of one percent of that of the moon. Tidelog's indications of planetary positions are intended as a guide to observation, not as a clue to tidal behavior.

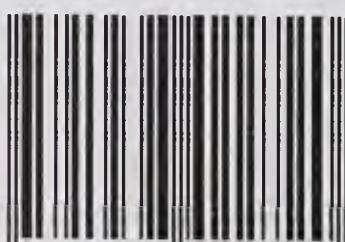
Some geologists theorize that the same forces which cause the highest tides may also trigger earthquakes, with most major quakes occurring near times when a new or full moon closely coincides with perigee. In earthquake prone coastal areas, some suggest this theory has some basis, while others claim the relationship is hit or miss. Those who like to see for themselves will be able to identify several such periods in the year to come and form their own conclusions.



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“Second Day of Creation”
~ M.C. Escher
Woodcut

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